DOCUMENT RESUME

ED 390 597 CS 215 456

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TITLE Improving Academic Achievement of At-Risk Students in English Education and Keyboarding I.
PUB DATE May 96
NOTE 119p.; M.A. Project, Saint Xavier University.
PUB TYPE Dissertations/Theses - Undetermined (040) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Academic Achievement; Action Research; Cooperative Learning; *High Risk Students; High Schools; *Portfolio Assessment; Rural Education; *Student Behavior; Student Empowerment; Student Motivation; Teacher Behavior; Writing Research; *Writing Workshops

ABSTRACT

This report describes a program for improving the on-task behavior of at-risk students to increase their academic achievement. The targeted population consisted of high-school students in a growing middle-class community located in a rural area of a midwestern state. The problems of academic under-achievement were documented through data including teacher-made tests, standardized tests, subject area progress reports, and teacher observation checklists. Analysis of probable cause data revealed that students' low achievement was related to low/no motivation, poor work habits, low self-esteem, and continuous academic failure. Faculty discussion revealed that students failed to stay on task and did not accurately complete assignments. Review of instructional strategies revealed an over emphasis on information giving by teachers. A review of solution strategies and an analysis of the problem setting resulted in the selection of the following interventions: the use of a writer's workshop and the use of portfolio assessment and student self assessment. As a result of implementing writer's workshop, cooperative learning, and portfolio assessment, at-risk students showed measurable improvement with on-task behavior. This improvement resulted in successful academic achievement for the targeted at-risk students. (Contains 52 references, and 9 tables and 3 figures of data. Appendices present survey instruments, checklists, rubrics, and teacher-made tests.) (Author/RS)

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ED 398 997

IMPROVING ACADEMIC ACHIEVEMENT OF AT-RISK STUDENTS IN ENGLISH EDUCATION AND KEYBOARDING I

By

*Barbara Klinger
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Submitted in partial fulfillment of the requirements for the degree of Master's of Arts in Teaching and Leadership

Saint Xavier University & IRI/Skylight
Field-Based Master's Program

Action Research Project
Site: Winnebago, Illinois
Submitted: May 1996

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Abstract

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Title: Improving Academic Achievement Of At-Risk Students

This report describes a program for improving the on-task behavior of the at-risk students in order to increase their academic achievement. The targeted population consisted of high school students in a growing middle-class community located in a rural area of a midwestern state. The problems of academic under-achievement were documented through data including teacher-made tests, standardized tests, subject area progress reports, and teacher observation checklists.

Analysis of probable cause data revealed that students' low achievement was related to low/no motivation, poor work habits, low self-esteem, and continuous academic failure. Faculty discussion revealed that students failed to stay on task and did not accurately complete assignments. Review of instructional strategies revealed an over emphasis on information giving by teachers.

A review of solution strategies and an analysis of the problem setting resulted in the selection of the following interventions: the use of a Writer's Workshop and the use of Portfolio Assessment.

As a result of implementing Writer's Workshop, Cooperative Learning, and Portfolio Assessment, at-risk students have shown measurable improvement with on-task behavior. This improvement has resulted in successful academic achievement for the targeted at-risk students.

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Chapter 1

PROBLEM STATEMENT AND CONTEXT

General Statement of Problem

The students of the targeted school underachieve in academic areas. Evidence for the existence of the problem includes teacher-made tests, standardized tests, subject-area progress reports, and teacher-observation checklists.

Immediate Problem Context

The targeted high school of grades 9-12 is located in a rural midwestern setting. The student population at the end of the 1994-95 school year was 398 students which is an increase of 29 students since the 1994 School Report Card figures were tabulated.

The racial composition of the student population is: Caucasian 99.5 percent; African-American 0.0 percent; Mexican-American 0.3 percent; Asian-American 0.3 percent; and Native-American 0.0 percent. The operative expenditure per pupil is $3,915. The attendance level at the targeted high school is 93.3 percent. The chronic truancy rate is 0.3 percent and the student mobility rate is 14.9 percent. The percentage of students that come from low-income families is 8.4 percent (State School Report Card, 1994).

The school has 29 teaching staff which includes a counselor and two teacher's aides. Seventeen of the teaching staff are females and all members of the staff are white. Eleven of the 29 have a Master's degree or higher, six are in the process of completing a Master's degree, and there is one teacher who does not hold a degree. The average number of years in the district is 13.3 years. The average salary of classroom teachers is $32,587. The administrative staff is composed of one principal and two office secretaries.

The graduation requirements from the school are: English--four years, science--two years, math--two years, social studies--two years, physical education--three years, and career education/resource management/health--each one semester. Other areas students may elect to study are: Art, automotive, band, business, chorus, computer science, foreign language, human resources, manufacturing, and carpentry. There are learning disability and inclusion classes offered in instructional areas required for graduation. The extra-curricular activities attempt to address the interest of all students. These activities include: interscholastic academic teams, such as JETS team (Junior Engineering and Technology Society), math team, and academic team; athletic teams for girls, such as cross country, volleyball, basketball, soccer, track, cheer-leading, and poms; athletic teams for boys consisting of

cross country, football, basketball, wrestling, track, and baseball; extra-curricular dramatic performances such as three-act plays and musicals, and various other clubs and organizations including the Spanish club, pep club, class officers, and student council officers.

The 1994 School Report Card listed the average class size as 18.4 students, but the school population increased by 29 students during the 1994-95 school year and class sizes continue to increase because of the community growth. As class sizes have increased, staff have seen evidence of more under-achievement.

The Surrounding Community

The school district serves a rural community that is seven miles west of a large metropolitan area in the midwest. This village, in varying degrees, is dependent upon the goods and services that the metropolitan area offers. The land usage within the school district is as follows: 46 percent residential, 21.9 percent agricultural activities, 16.7 percent streets and alleys, 7 percent public and semi-public usages, such as churches, village offices, etc., 3.5 percent industrial, 2.6 percent parks and recreational space, and 2.3 percent commercial enterprises (Gearhart-Minick, 1994).

The community is composed of a 98 percent White population. The average price of a home is $69,750. The community has one federally-subsidized apartment complex.

Eighty-one percent of the residents of the community are high school graduates, and the median household income for this community is $36,544 (United States Census Report, 1990).

This community is highly supportive of the school district and essentially all school groups have a support group organized and managed by parents. Some examples are: Fans Club, Music Boosters, Foundation for Educational Excellence (FEE), and American Foreign Exchange System (AFS). There is a seven member Board of Education. Because the school district serves several townships, board members are elected proportionately from these different townships.

The community is experiencing extensive growth. The projected population increase, based on current growth and anticipated residential development, is 54 percent between the years 1990 and 2000. Due to this rapid growth, the Board of Education employed an educational consultant to conduct a Demographic and Facility Analysis (Norwood, 1992). Based on these findings, a referendum was placed on the April 4, 1995 ballot for the purpose of building and remodeling within the district. The referendum was defeated; therefore, class size will continue to increase, and student achievement may suffer.

Regional and National Context of Problem

The problem of under-achievement affects students who are "variously labeled 'at risk,' 'disadvantaged,' or

'educationally deprived'" (Means & Knapp, 1991, p. 282). A study of students at-risk was conducted by Phi Delta Kappan (1989). This project involved 22,018 students in 276 schools. One purpose of this study was to develop a scale to measure at-riskness (Frymier & Gansneder, 1989). The survey constructed an "at-risk scale". Of the 45 risk items, the analysis identified only five factors as significant. Of those five, only two could be dealt with by the school. Those two factors were personal pain and academic failure (Frymier, 1992). In 1989, Frymier reported that:

> Between 25 percent and 35 percent of the 22,018 students in this study are seriously at-risk. One of seven students had been retained in grade at least once. One out of seven failed at least one course last year. One out of six was at least one year older than the typical student in that grade in school (p. 144).

One concept that has been the basis of educational curricula is that "the basics" must be learned before more advanced ideas can be taught. Researchers in cognitive science question whether this is true. Most students who are found to be lacking in certain areas are pulled out to learn "the basics" and may never receive advanced skills (Means & Knapp, 1991).

One factor found to affect students' performance in school is the discovery of the ability to achieve (Kallick,

1992). Another factor found to affect students' achievement is class size (Pate-Bain, Achilles, Boyd-Zaharias & McKenna, 1992).

Students are "at-risk" because the educators are not addressing the needs of the students. The educators must start with what the students know and can relate to in their world. In this way the schools can broaden the students' knowledge of the higher order thinking skills (Barone, 1989).

Educators confess to lack of skill with, or confidence in, many of the approaches to working with at-risk students (Frymier & Gansneder, 1989). Teachers do not always have control over all the issues that need to be addressed. Education needs major changes and those changes will not be inexpensive. Schools must become more effective at serving the needs of the at-risk student population. The schools must ask students questions and then listen to the students' answers. The response the school makes must: address students' characteristics, fulfill students' basic needs, and respond to students' uniqueness (Compton & Baizerman, 1991). Schools must change how they operate, what they invest in, what they want to accomplish, and how they relate to children in their care (Darling-Hammond, 1990).

Chapter 2

PROBLEM EVIDENCE AND PROBABLE CAUSE

Problem Evidence: English

In order to document the extent of student underachievement in the area of written language skills, a writing survey was administered, a subtest of the Woodcock Johnson Revised (1989, 1990) on written language skills was given to each student, and a teacher-made observation checklist was kept on each targeted student. Fifteen students in the special education English classes were involved in this process over a two-week time period.

A writing survey was developed by the researcher to assess students' feelings toward writing (Appendix A). Fifty-seven percent of the targeted students felt writing skills were in the student's possession, 7 percent of the students felt at times writing skills could be exhibited, and 36 percent of the students stated that the skills needed to be classified a writer were not possessed. Most students stated that writing skills were acquired at school. The students also listed parents and friends as contributors to the skills in writing. The students gave the following reasons for why people write: for fun, to show feelings, to

communicate with others, to learn, and for work. Many different responses were given by the students when asked what a good writer needs to do to write well. Some of these responses included: to practice penmanship, to put in details, to concentrate, to have good skills, and to have a good imagination. The students were not sure how teachers decide which pieces of writing were good ones. The answers given were: by talking to other teachers, by being able to read the piece, by good use of punctuation, and if the writing made sense. When asked how students felt about writing skills, 53 percent answered positively, 27 percent were not sure, while 20 percent did not feel skillful with writing.

An analysis of the survey revealed that approximately 50 percent of the students felt good about writing. Most of the students felt that writing skills were learned at school from the teacher, but were unclear as to how the teacher decided which pieces of writing were good.

A teacher-made observation checklist was developed by the researcher for use with the student's writing sample (Appendix B). Each student wrote on a topic of choice. A summary of the observation of the writing sample is presented in table 1.

Table 1

Teacher Observation Writing Checklist

Percent of Students Demonstrating Each Skill

Writing Area Observed	Frequently	Sometimes	Not Yet
Topic Sentence	73	0	27
Complete Sentence	40	40	20
Wide Vocabulary	0	7	93
Capitalization/Punctuation	40	47	13
Spelling	27	40	33
Grammar	7	87	6

In an analysis of the data, use of a topic sentence is a skill that 73 percent of the students have mastered. Use of complete sentences and correct capitalization/punctuation were used frequently by 40 percent of the students. Forty percent of the students sometimes used complete sentences while 20 percent were not yet able to make a complete sentence. Complete sentences needed to have one complete thought with no fragment or run-on sentences. Forty-seven percent of the students were able to use capitalization/punctuation correctly while 13 percent were not yet able to do so.

Spelling is an area of difficulty for many learning disabled students. Twenty-seven percent of the students were frequently able to spell words in the writing sample correctly. Another 40 percent sometimes spelled the words

correctly, while 33 percent were not able to spell words in the topic chosen.

Grammar and use of a wide vocabulary were areas of concern. Grammar included use of transition words and subject/verb agreement. Only 7 percent of students were able to meet the objectives for grammar frequently, 87 percent sometimes, and 6 percent were not yet able. No students were found to be able to use a wide variety of words. Seven percent of students used a variety of words in the writing at times with 93 percent not yet able to do so.

This finding may be related to students' poor spelling ability. The words that are chosen for use in the writing may be because those are the words the student can spell.

A subtest of the Woodcock Johnson Revised on written language skills was given (Appendix C) to each targeted student. After the subtest was administered, a raw score was tabulated. The raw score was then compared to the grade equivalent score. The grade equivalent scores ranged from 13.6 to 2.0, with the average score being 6.3.

Probable Causes--English

The literature suggests several probable causes for students' poor writing. Graham (1992) was surprised to find that there was no time allocated for instruction in writing. The average amount of time students with learning disabilities spent writing during the day was 25 minutes. Most of

the time was spent on the mechanics of writing (handwriting and spelling) rather than on the content of the piece.

When instruction was given, it was inadequate (Graham, Harris, MacArthur, & Schwartz, 1991). Learning disabled students did very little meaningful planning before writing (Graham, 1992). When these students are revising writing, the concern is focused on mechanical errors rather than on the substance of the paper (Graham, Harris, MacArthur, & Schwartz, 1991). Students need to be shown how to write.

Learning disabled students do not transfer information from one situation to another. Because there is no transfer, these students are continuously taught the basic skills and are never exposed to more advanced skills (Means & Knapp, 1991). When rules and skills are taught separately from the writing process, students show smaller gains (Davis & Schloss, 1992).

There is now conclusive evidence to show that tracking of low and middle ability students is harmful. This practice lowers the students' academic achievement (Zemelman, Daniels, & Hyde, 1993). Because learning disabled students have a record of continuous academic failure, the students are less motivated.

Some probable causes for under-achievement in the area of written language skills include: inadequate time devoted to writing, inadequate instruction in how to write, and inadequate motivation by the writer.

Problem Evidence--Keyboarding I

In order to document the extent of student under-achievement in the area of keyboarding skill development, a teacher-made checklist was kept on each targeted student and teacher-made tests were administered.

A teacher-made checklist was developed to observe the basic keyboarding skills of the 23 targeted students (Appendix G). These skills were observed and recorded. A summary of the skills observed and the students' performance is presented in table 2.

Table 2

Teacher Observation Technique Checklist

Points Earned	0	1	2	3	6
Areas of Evaluation Categorized Below	Number of Students Earning These Points				
Uses correct fingering on alphabetic keys	0	0	0	23	NA*
Uses correct fingering on special keys	1	6	4	12	NA*
Correctly removes paper	0	0	0	23	NA*
Proper use of warmup time	1	3	4	15	NA*
Keeps palms up off machine frame	11	0	0	12	NA*
Keeps fingers curved while keying	1	1	3	18	NA*
Keeps finger contact with home row	3	2	2	16	NA*
Exhibits proper seating posture--feet flat on floor, head erect, eyes focused on book, back straight, body a hand span from machine, elbows close to body, and arms hanging loosely at sides	12	0	1	0	10
Makes proper use of class time	1	2	4	16	NA*
Has a good mind set and attitude	0	2	5	16	NA*
Observes end of period "cleanup routine"	0	0	3	20	NA*

*NA indicating that six points were not obtainable in these categories.

Point values were determined through teacher observation of the targeted students over a one-week period. On a specific day, the teacher would select three of the eleven checkpoints and observe and record for each student. The area describing the proper seating posture was valued at six points because of the significance of eyes being directed at the book (or copy) and the number of body positions being checked. In this category if the student was looking at the keyboard or the paper in the typewriter and at least one body posture was incorrect, the student received a zero. If the student had correct posture and eyes focused on the book (or copy), six points were given. One students received a two in this category because posture was close to perfect but eyes were observed off copy once.

In all other categories, if the student was observed doing the skill correctly, a three for that category was recorded. If the skill was observed as close to but not perfect, the student received a two, if the skill was questionably inconsistent, the student received a one, and if no skill ability was exhibited, the student received a zero. The teacher-made checklist breaks down clearly into two categories: student on-task behavior and keyboarding skill development. Analysis of the data suggest that 65 to 70 percent of the students exhibited proper use of warm-up time, on-task behavior during class time, positive mind set toward the curriculum and the teacher, and the correct

classroom clean-up procedure (Appendix H) before departing for the next class hour. This indicates a cooperative group of students willing to follow directions and attempting to accomplish the necessary steps to be successful keyboarding students.

The percentages in the skill development categories are not as favorable. Some techniques such as correct usage of fingers on alphabetic keys at 100 percent is outstanding, but the targeted students' percentage dipped to 78 percent for keeping fingers curved properly while keying text, 70 percent for keeping contact with home-row keys while striking keys off home row, and 48 percent for exhibiting proper seating posture with feet flat on the floor, head erect with eyes looking at the book or copy, back straight, the body a hand span from the machine, elbows close to the body, and arms hanging loosely at sides. These data suggest that improvement in keyboarding skills is needed in order for the targeted students to become successful keyboarding students.

Teacher-made tests were administered at the end of each week (Appendices I, J, K, and L) to further assess keyboarding skill development among the targeted students. The results of these tests are displayed in table 3.

Table 1

Knowledge Tests of Keyboarding I

Weekly Tests Given			Twenty Points Per Test Number of Students Receiving Scores			
Test Title	Median Score	Avg. Score	20/19	18/17	16/15	Lower
1. Machine Parts and Posture Essay	18	17.35	10	7	2	4
2. Calculating Margins	10	12.17	6	0	2	14
3. Calculating Words a Minute (WAM) Proofreading	16.5	15.3	6	5	6	6
4. Correct Spacing for Punctuation	12	14.09	5	3	2	12

In analyzing the data collected on the targeted students' weekly tests pertaining to keyboard setup and formatting, one at-risk area for students is the application of math calculations in the keyboarding curriculum. In order to determine the words a minute (WAM) a student types and the left and right margins to set for the document being created, math steps and calculations must be understood and utilized. On the two tests requiring math calculations, the average percentages were 61 percent and 76 percent. More closely examining the WAM and proofreading test resulted in a finding of 7% percent on the math calculation of WAM and a 63 percent class average on proofreading. This indicates that the skill of proofreading is

another area where keyboarding students are at-risk. Tests of students' ability to memorize facts in regard to the typewriter resulted in an average percentage of 87 percent as shown in test one and 70 percent as shown in test four of table 4. This disparity in percentages indicates the lack of using the ability of mental training for test four to memorize the necessary facts related to the skill of keyboarding and formatting documents appropriately. It must be noted that 22 students were tested on test four. One student who had taken tests one, two, and three moved from the school district pervious to test four.

Probable Causes--Keyboarding I

Since the advent of the computer in the elementary classroom, the quality of keyboarding skills has shown a steady decline. The earliest keyboarding instruction within this school district, previous to the 1993-94 school year, was a six-week keyboarding/introduction to computers class at the sixth/seventh grade level; but students within the district have been exposed to the computer as early as first grade. As stated in The Balance Sheet:

> Keyboarding instruction must be provided at the initial level students are required to interact with the computer. If this instruction is not available, they will be forced to develop their own--generally ineffective--keyboarding skills (Rhodes, 1989, p. 35).

A summary of the student survey (Appendix M) describing the previous experience using a keyboard is presented in table 4. Of the targeted students, 87 percent were freshmen, 4 percent were sophomores, 9 percent were juniors, and there were no seniors.

Table 4

Student Survey with Regard to Keyboarding Usage

Survey Question	Yes	No
Previously Worked on Keyboard	15	8
Keyboard in Home	18	5
School Keyboard Usage Without Formal Keyboarding Instruction	19	4
Previous Keyboarding Instruction	11	12
Any Follow Up Keyboarding Instruction	1	10
Keyboarding is Skill of Coordination	18	5

Of these targeted students, 83 percent indicated using computers in the school setting without formal keyboarding instruction. Also, 78 percent had access to a home keyboard in the form of a computer or typewriter and of those, 45 percent stated that the keyboard had been used for doing work. Forty-eight percent did have some keyboarding instruction but indicated this occurred after the introductory usage of the keyboard. The length of instruction was nine weeks or shorter for 56 percent of the students. One student's instruction lasted one semester (18 weeks), and one was enrolled for a full school year; but that

student failed the course. Thirty percent of the keyboard instruction took place at the seventh-grade level, 13 percent at the eighth-grade, and 4 percent as a freshman in high school.

Another area that puts the keyboarding student at-risk is the misconception that the skill of keyboarding is directly related to coordination rather than the mental discipline of knowing the location of the keys and the nonkeyboarding material such as punctuation usage. Of the 23 targeted students, 78 percent believed keyboarding was a function of innate coordination and this determines the students' success at the keyboard. A further analysis of the student keyboarding survey indicated that 35 percent took keyboarding as an elective because of the computer world that exists, another 35 percent had no specific reason for taking it, 23 percent took the course as a recommendation from a parent, guardian, or school counselor, and one student, or 4 percent, was born with webbed fingers resulting in surgery and wanted keyboarding to help improve the use of these hands.

Effective in September, 1994, formal keyboarding instruction was introduced to the students of this district at the fifth grade level. The assigned teacher had no training in keyboarding instruction but was chosen because of being the fifth grade language arts teacher and because of showing an interest in presenting the curriculum

(G. Berry, personal communication, August 28, 1995). The students are instructed using a computer laboratory and utilize the learned keyboarding skills within the language arts curriculum. Once again the literature states that keyboarding skills should be taught at the earliest level that students are exposed to computers in any educational experience (Klopping, 1993). The students are still developing ineffective skills four years ahead of formal keyboarding instruction.

Another important issue that has affected the performance of keyboarding students at the secondary level is the fact that business educators have not participated in the implementation of keyboarding instruction at the elementary level. Since the elementary teachers have not been trained in the instructional methods of keyboarding skill development, the best methods of delivery may not have been utilized (Sormunen, 1991).

Keyboarding teachers need to stress to students that using mental training to learn the keyboard is of utmost importance in the development of keyboarding skills. As communicated by Condon and LaBarre in Lewis (1991),

> One keyboards...with the brain. The point of practice should seldom be to increase manual dexterity. The students are likely to begin keyboarding...with all the manual dexterity they will ever possess. The object of instruction is to teach the keystrokes...to the brain

and foster the rapidity with which the brain can send those knowledges to the hand. (p. 23)

The literature suggests several underlying causes for academic under-achievement in the area of keyboarding skills. In the process of keyboarding development, the students must recognize the necessary non-keyboarding skills needed to be academically successful. So often, students neglect these non-keyboarding activities and concentrate only on the act of keyboarding. Students will ignore proofreading the assigned tasks or do an inadequate job of proofreading. The students are more concerned with the speed necessary to complete the task rather than the quality of the work. The students fail to designate time for reading of instructions, for editing of copy, for correct formatting, and for proofreading the work before submitting it for assessment (King, 1990).

A possible cause of these poor proofreading skills is that proofreading is talked about very often by the teacher, but the skill is not taught to the students. "In fact, most of us teachers have not been taught specific proofreading skills" (Madraso, 1993, p. 32).

Practices that are taking place in some curriculums are undermining the importance of keyboarding instruction. Research details how students use computer tutorials for basic keyboarding lessons. The students utilize these programs approximately three times weekly for ten-minute

intervals (MacArthur, Schwartz, & Graham, 1991). This is not adequate time to produce a skill at the keyboard. As a result of this form of learning, ineffective keyboarding skills are implemented.

The advent of new technology has been cited as another possible cause in the decline in academic achievement of the keyboarding students' accuracy when being tested on straight-copy timed writings. This assumption "may be explained by the weak and strong finger theory" (Joyner, Arnold, & Schmidt, 1993, p. 16). The literature suggests that the extremely sensitive touch found on many of today's keyboards allows the keyboardist to easily key incorrect characters.

> As technology becomes an increasingly pervasive part of our lives, the skills for using that technology become progressively more important. Keyboarding, a prime example, is more essential than ever before because of the widespread use of computers in our society (Hanson, 1991, p. 2).

Some probable causes for under-achievement in the area of keyboarding consists of: early usage of computers with no touch approach and no skill/technique instruction, lack of mental training needed to learn the keyboard and factual keyboarding data, lack of implementation of non-keyboarding skills, and lack of proofreading skills.

Chapter 3

THE SOLUTION STRATEGY

Review of the Literature

In the process of reviewing the literature, many different suggestions for solving the problem were acquired and studied. The following summarizes the major points covered by the professional literature.

According to Atwell (1987) the Writer's Workshop is one way to improve writing skills for at-risk students. The students take responsibility for choosing topics to write about, accept responsibility for self-assessment of written work, evaluate each others' work through the process of peer conferencing, and revise the work where deemed necessary.

The teacher, as facilitator of the workshop, helps students expand on ideas and monitors daily progress. Through mini-lessons the teacher will show students aspects of writing tasks that need improvement relative to the students' current task(s).

Student ownership in this process is most important. Students must be involved in the decision making from beginning to end to insure students take responsibility for learning (Au, Scheu, Kawakami, & Herman, 1990).

Graves (1983) states that the best way to teach writing is to simply let students write. According to Graham (1992), in order to make writing meaningful three things must be considered: The students' writing is most effective when directed toward an authentic audience, the student authors have tasks that are both interesting and important, and a real purpose is addressed in the writing task.

Another suggested solution for the problem is cooperative learning. According to Davidson and Kroll (1991) cooperative learning is learning that takes place in an environment where students in small groups share ideas and work collaboratively to complete academic tasks. In academic areas, cooperative work can be used in practicing skills, in discovery learning, in laboratory investigation and data collection, in group discussion of concepts, and in problem solving. It can also be combined with computer instruction, peer tutoring, brainstorming, reviewing, and group testing.

According to Slavin's study (cited in Davidson and Kroll, 1991) student achievement is increased by cooperative methods that use group rewards and individual accountability. A cooperative learning group works to produce a product or achieve some other goal. These groups are very helpful and supportive to the students because discussion and application of the content that the teacher previously presented to the class can occur (Chapman, Leonard, &

Thomas, 1992). These groups also have many benefits, both cognitive and affective. As stated in Davidson and Kroll (1991):

> Among benefits that have been the subject of investigation are increased knowledge or skills, increased conceptual understanding, improved attitudes or motivation, improved communication skills, and improved social skills. (p. 363)

Johnson and Johnson (1993) state some of the problems teachers must address in the process of developing cooperative learning settings. Gifted students do not always engage in cooperative learning with an agreeable attitude. There are situations where the teacher places learners in a cooperative environment but the students do not do cooperative learning. This method of student learning is not intended to be a seating arrangement but an interactive learning exchange. It is to be void of competition and structured to develop the interdependence of the group to promote achievement of all group participants. Social skills must be formally taught to the students involved in cooperative learning in order for the development of interpersonal skills necessary for success.

Cooperative learning has been a successful approach to untracking schools and improving the academic achievement of the "low" and "average" students while "high-achieving students" progress is undiminished and sometimes improved.

Schools who have implemented cooperative learning and eliminated tracking have noted improvements in discipline, school climate, and teacher morale (Drake & Mucci, 1993).

Cooperative learning is an alternative to the traditional approach of tracking students in ability groups. Research has indicated that the traditional approaches:

> Underestimate what students are capable of doing; postpone more challenging and interesting work for too long--in some cases, forever; and deprive students of meaningful or motivating context for learning or for employing the skills that are taught (Means & Knapp, 1991 p. 282).

Literature states that through the use of the portfolio educators can encourage students to be self-directed learners (Paulson, Paulson, & Meyer, 1991). A portfolio contains several separate pieces that may not be significant standing alone, but when put together, these pieces produce a more realistic picture of the student (Burke, 1994). A portfolio is a tool that an educator can implement to motivate students to take responsibility for learning. The use of this learning tool develops ownership and becomes the basis for pride in students' accomplishments.

Research has shown that the students must participate in the selection process for the portfolio. The focal point should be placed on process of growth rather than content. Portfolios can be established for a designated period of

time or can be a cumulative collection of work. The students conference with the teacher about works in progress, additions, and deletions to this portfolio (Hebert, 1992).

Portfolios provide an opportunity to improve students' self-image by showing accomplishments rather than deficiencies. An important component of a portfolio is student self-reflection. Criteria for evaluation are established by the students and teacher. Based on these criteria, choices of work are placed in the portfolio. According to Paulson, Paulson, and Myer (1991) "Portfolios can become a window into the students' heads, a means for both staff and students to understand the educational process at the level of the individual learner" (p. 62).

Literature on the theory of multiple intelligences suggests that humans have been observed possessing more than one mode of learning. Learners' strengths vary and this can be governed by the context of the work. When individual strengths are distinguished, these can be beneficial in the learning process (White, Blythe, & Gardner, 1991).

Howard Gardner and his colleagues developed the theory of multiple intelligences. In White, Blythe, and Gardner's (1992) research, seven areas for human achievement have been identified as stated in Burke, (1994):

Linguistic intelligence involves ease in producing language (writers, poets, storytellers). Logical-

mathematical intelligence involves the ability to reason and to recognize abstract patterns (scientists, mathematicians). Musical intelligence includes sensitivity to pitch and rhythm (composers, instrumentalists). Spatial intelligence is the ability to create visual-spatial representations of the world and to transfer those representations either mentally or concretely (architects, sculptors, engineers). Bodily/Kinesthetic intelligence involves using the body to solve problems, to create products, and to convey ideas and emotions (athletes, surgeons, dancers). Interpersonal intelligence is the ability to understand other people and to work effectively with them (salespeople, teachers, politicians). Intrapersonal intelligence is personal knowledge about one's own emotions or self. (p. 73-74)

Teachers' learning style preference is frequently how teaching and assessment take place. Those students who possess a learner style most matched to the teacher will be most successful. Therefore, teachers must erase this disadvantage felt by many students. Students are often labeled with lack of ability when the problem is lack of addressing the multitude of learning styles teachers encounter daily. It is important that teachers expand methods of teaching and assessing to accommodate all learners. If teachers make

these necessary accommodations, student performance will show marked increase (Sternberg, 1994).

The key to teaching is to vary the approach teachers use in addressing the assortment of thinking and learning styles encountered in the classroom. When this takes place, academic achievement will improve. Gardner (1987) states:

> ...not all people have the same interests and abilities; not all of us learn in the same way and we now have the tools to begin to address these individual differences in school. (p. 190)

Motivation is one factor that has been studied concerning student under-achievement. The students who have a pattern for failure use the following four reasons most frequently:

1. Not having the ability.
2. Not expending enough effort.
3. Task difficulty.
4. Luck. (Alderman, (1990).

At-risk students have the feeling of no control over academic success or failure. These students expect to do poorly. As stated by Covington and Beery (1976) in the article written by Alderman (1990): "Low achieving students in particular need to know exactly what they are expected to do and the criterion for measuring their success." (p. 10)

The first step in increasing motivation is goal setting. Goals should be specific rather than general.

harder rather than easier (but attainable) and close at hand rather than distant. Teachers and students should jointly decide on goals to pursue.

Next, learning strategies are identified that will help accomplish goals. Students then measure success based on the goal that was established. Lastly, students will attribute success to personal effort or abilities. The teacher's role is to help the student make the appropriate link. If students feel that success/failure (by using appropriate strategies) is within student's power, these at-risk students will become more motivated.

Eighty years of research on childrens' learning patterns has determined that schools should be designed to accommodate the differences in children. One way this can happen is by implementing an interdisciplinary curriculum.

When a number of different subjects are woven together in a project outcome, it simulates a real-life activity. Separate subject skills taught to students need to be pulled together in a culminating project that the students can hook to real-life activities. Students need the opportunity to explore, and projects can give this opportunity to the students.

Interdisciplinary projects teach students to work with others, encourage creative thinking, encourage responsibility, and provide for the opportunity to share ideas with other classmates (Everett, 1992).

When students are permitted to investigate areas of interest, the motivation level increases. Planning the interdisciplinary projects should involve the students through a class meeting. Students are given the opportunity to question, submit ideas, and be a part of the decision-making process. The teacher takes the role of facilitator and observes learning and offers suggestions when needed. Students are active learners through this process and become more responsible for the process of learning.

The interdisciplinary learning method has been called the "developmental/interaction approach" (Everett, 1992 p. 59). In this approach, the child is able to interact during stages of growth. With this style of classroom structure, learning is more attuned to the students' learning style.

Research has shown that when a school has a climate that is supportive, it is helpful for the at-risk population. Within the classroom, the teacher is the key to establishing such a safe and comfortable environment. At-risk students should not be assigned to at-risk teachers. "Only teachers who have both the will and ability to create positive, supportive, intellectually challenging classroom environments should be afforded the opportunity to work with these students" (Pigford, 1992, p. 156). It is important, that when working with at-risk students, teachers acknowledge the need for positive teacher/student interaction.

Teachers must hold high expectations for at-risk students and make them accountable for both behavior and academic achievement.

It is of utmost importance that each at-risk student receive personal recognition by the staff. Too often at-risk students have not received personal recognition; but, through a healthy school environment, these students can feel connected to adults in a trusting relationship.

Employing staff development techniques to address the at-risk population will help the students feel important, unique and visible (Pigford, 1992). The classroom teacher is where the answer is found. These teachers need to be competent, compassionate, sympathetic, and academically challenging. Through staff development programs, the school can help with the academic achievement of the at-risk population.

Peer mentoring is another solution strategy for improving the academic achievement of the at-risk student. For at-risk students, the feeling that someone depends on that student is clearly very important. Humans have a natural desire to want to be needed and important. Unfortunately, students with poor academic achievement develop the feelings of low self-esteem, worthlessness, and inadequacy. The at-risk student faces many failures. Schools should try to counteract this feeling of inadequacy with special programs to lift self-esteem. One approach

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that has been implemented is a peer mentoring program where an altruistic quality is developed in these at-risk students. It is important to help these students develop self-pride and this happens when society can make the student feel useful. "Helping others is therapeutic" (Curwin, 1993, p. 36).

An important feature of this solution for at-risk students is to eliminate the external reward and aim for the students to focus on the internal benefits. This program should be made optional for the students, and the teachers should not place pressure on the students' involvement. An example of a helping opportunity would be tutoring a younger student. This program needs to be monitored by adults so a positive experience for both the at-risk students and the mentored students can develop. When genuine opportunities for assistance are directed towards at-risk students, "no longer do the labels 'bad,' 'slow,' or 'at-risk' apply" (Curwin, 1993, p. 39). This positive experience can change the attitudes of the students labeled at-risk and those who work and teach these students. These positive experiences and attitudes can also lead to change and success in the students' academic achievement.

Increasing the involvement of parents of at-risk students is accomplished through improving communication between home and school (Vandegrift & Greene, 1993). By

improving communication, parents are more likely to be supportive of the children and of education.

In a pilot project in Arizona, many wonderful events were offered to increase parental involvement, but families didn't come. Through interviews with these parents it was found that what the parents really wanted was to learn English (most spoke only Spanish). The school revamped the program to offer English as a second language. Parents got excited about reading with the children.

> The success of any parent involvement strategy depends on how well it matches an individual parent's needs. The secret is to know who your parents are and to have in a school's repertoire as many options for involvement as possible. This ensures an appropriate match between a parent's level of commitment and willingness and ability to be involved (Vandegrift & Greene, 1993, p. 21).

Another program for at-risk teens allows parents to meet in support groups. This enables parents to meet with others who are dealing with the same problems.

When a student breaks a rule that should result in an out-of-school suspension or an expulsion, the school offers the student and parent an alternative: to attend a number of meetings equal to the number of days the student would be suspended (Roberts, 1993). At least one parent must agree to attend the meetings with the student. In the meetings,

parents learn how to set limits and gain support. Teens learn personal accountability.

These programs are examples of the changes that are occurring to increase parental involvement--involvement that is necessary for students' success in school.

The incorporation of study skill activities has been effective with at-risk learners. Decker, Spector, & Shaw, (1992) state that study skills should be taught within the regular classroom content material rather than as a separate course.

A list of weekly or unit assignments can be posted on the board or written out to facilitate students' learning and to help them learn how to manage time. A daily check on student preparedness for class can be helpful. Also, a specific time to look at notebook organization can help. These can be checked quickly and counted as one or two quiz grades at the end of the quarter. Notetaking and outlining skills can be fostered through the use of clustering, mind-maps, and concept trees.

Students memory can be enhanced through the use of flashcards, color cuing, and mnemonics. Flashcards can be used with new vocabulary terms. Different concepts can be highlighted in different colors to set these ideas apart. The use of mnemonics can help students memorize a diagram, map, or list. Different methods of delivery should be implemented so all learning styles are taken into consider-

ation. As students self-assess what is known and how to study, students become more realistic about how to be successful.

Active learning can be accomplished through the use of manipulatives. According to Scheer (1985) manipulatives can be used so that students can see what is trying to be explained abstractly. Recall the old Chinese proverb:

I hear and I forget;

I see and I remember;

I do and I understand.

Research shows the use of manipulative materials helps students, from the elementary levels to the advanced levels of high school, understand academic concepts (Coes, 1993).

Manipulatives are used in the context of transfer of learning. According to Bohan and Shawaker (1994) if transfer is to occur, the students must progress through several stages. The stages are called "concrete," "bridging," and "symbolic." The concrete stage is the use of manipulatives only. The bridging stage uses manipulatives and symbols simultaneously. Symbols alone are used in the symbolic stage. As stated in Bohan and Shawaker (1994):

> A lot more is involved in using manipulatives than merely having students push objects around (Cohen 1991). Unless we help students make that critical connection between conceptual work done with manipulatives and the procedural knowledge it is designed to

promote, manipulatives may be mere tag-ons to the mathematics curriculum rather than what they can be--an essential, enlightening, component of the mathematics experience of our students. (p. 34-35)

The philosophy of the Constructivist theory has been proven to be successful with at-risk students. As mentioned in Aikenhead (1992):

> Constructivism assumes that meaningful learning takes place when students construct their own meaning of an event. This can occur in a number of ways; by active participation, by reflection, and by practice at transferring a scientific idea to an everyday context. Through participation, reflection, and practice, students can incorporate new ideas into their previous knowledge, or perhaps even replace their previously held, common-sense conceptions with more precise scientific conceptions. (p. 32)

Traditional instruction transmits academic facts, skills, and concepts to students as passive learners. Active learner involvement is stressed in constructivism. According to Clements and Battista (1990): the basic tenets of constructivists are as follows:

1. Students' knowledge is actively created or invented.
2. Students' ideas are constructed by reflecting on prior physical and mental actions.

3. Interpretations of the world are shaped by experiences. No one true reality exists.
4. Children grow socially by learning the intellectual life of those in the surrounding environment.
5. If set methods or values are placed on the student, there is serious curtailment of students' sense-making activity.

The interventions chosen: The use of a Writer's Workshop and the use of Portfolio Assessment, will aid in creating a constructivist classroom. According to Brooks and Brooks (1993): teachers cannot accept sole responsibility for students' learning. An educational environment should be created where the students personally assume responsibility for learning. To provide such an environment, teachers must encourage self-initiated inquiry, provide appropriate materials for the learning tasks, and facilitate teacher/student and student/student interactions.

Project Outcomes and Solution Components--English

As a result of a Writers' Workshop program during the period of September 1995 through January 1996, the targeted English students will increase writing ability as measured by writing samples and standardized test scores.

In order to accomplish the terminal objective for English, the following processes are necessary:

1. Learning centers will be established.
2. Peer and student-teacher conferencing will be employed.
3. Portfolio assessment will be implemented.

Action Plan for the Intervention--English

1. Learning centers established.
   A. Arrange classroom.
      i. Individual work area - Students work on current piece of writing.
      ii. Group work area - Students may peer or teacher conference here.
      iii. Supply table - Supplies necessary for writing are placed here, such as construction paper, scissors, pens, pencils, white-out and stapler.
      iv. Reading materials area - Different types of reading materials will be placed here such as, books of different readability levels, newspapers and magazines.
      v. Bulletin board area - Make space available to display current pieces of students' written work.

B. Class routine.

i. Status of the class (5-8 minutes).

This consists of a weekly assignment sheet (Appendix D) for each individual student. Sheets are the work day plan that verifies for the teacher what the student has been doing all week and makes a student accountable for the time in class. Sheets must be filled out at the end of each class period. The assignment sheet will be reviewed and collected by the teacher each week.

ii. Mini-lesson (5-8 minutes).

The mini-lesson is time in class that, in the beginning, is used to discuss different areas in the room and what the students are to be doing in each area. For example, the individual work area is a quiet area where students can go to work undisturbed on a current piece of writing. As students' written work is assessed, the teacher may use this time to teach a particular skill that is seen to be missing in the students' writing. The mini-lesson does not happen everyday, but on an as-needed basis.

iii. Writing time (20-30 minutes).

During this time, students will work on the current piece of writing. The topic may be assigned to the class as a whole by the teacher or may be left up to the student to choose individually. Individual topics may come from a list of topics the students have compiled or from a current book or article the student has read.

iv. Group sharing (10-15 minutes).

Students share the work produced that day. If the student has produced individual work, then sharing is decided by the student. Students may choose to share or not, but each must do so at least once a week. Sharing can be kept track of on weekly assignment sheets. On topics assigned by the teacher, an all-class discussion will take place where students can discuss ideas and points of view.

C. Set up library time.

Once a week.

D. Set up field trips and speakers.

Field trips will be set up to places such as a newspaper. Speakers, who write as a career, will be invited to the classroom to discuss how writing

is accomplished. This will help the students see how the process of writing is accomplished.

2. Peer and student-teacher conferencing implemented.

Rules for peer conferencing will be established through the Revising Strategy form (Appendix E). Peer conferencing will take place when a student has finished the first draft on the current piece of individual writing. Student-teacher conferencing will take place once a week and will work from the student's weekly assignment sheet. Pieces of writing will be looked at, discussed and teacher assistance will be given on skill areas found to be lacking.

3. Portfolio assessment established.

A. Work in progress.

This portfolio will contain all pieces of the student's writing. There is no criteria for this, only that it must have been written by the student.

B. Finished work.

This portfolio will be separate from the work-in-progress. A completely finished piece that has gone through a peer and teacher conference will be put in this folder. It may be hand written or typed and should be one the student considers to be best work. A rubric (Appendix F) assessing the written piece will be completed together in a student-teacher conference at twelve-week intervals three times per school year.

Methods of Assessment--English

In order to assess the effects of the intervention in English, writing samples will be evaluated through standardized test scores, student-teacher conferencing, and portfolios.

Project Outcomes and Solution Components--keyboarding

> As a result of the implementation of portfolio assessment during September 1995 through January 1996, the targeted keyboarding students will show skill improvement as measured by technique observation checklists, timed writing assessments, keyboarding jobs, and the finished portfolio.

In order to accomplish the terminal objective for keyboarding, the following processes are necessary:

1. Establish with students a work-in-process folder and a portfolio folder for use in self/teacher assessment.
2. Design standards or rubrics for work.
3. Inform the parents of the targeted students of the class rules and expectations by having a parent/guardian sign the bottom of the student's copy and return it to the teacher.
4. Establish conference schedule with students.

Action Plan for the Intervention--Keyboarding I

WEEK 1--August 28-September 1

Monday--20 minute class period

1. Students complete survey (Appendix M) on previous keyboarding knowledge and experience.
2. Students are given class rules and expectations form (Appendix N) to be read, signed, and coupon returned by student from parent/guardian.

Tuesday

1. Portfolio creation.
   A. Explain to the targeted keyboarding students what a work-in-process portfolio and a finished portfolio are and how the portfolio will be used in the assessment process.
   B. Model for the students a facsimile portfolio created by the teacher.
2. As students begin the use of the keyboard in Lesson 1, have all work in process during the week placed in the work-in-process folder.

Wednesday

1. Finish up or review Lesson 1.
2. Lesson 2 introduction of new keyboarding letters.
3. Review orally parts of the typewriter and keyboard.

Thursday

1. Completion of Lesson 2.
2. Introduce Lesson 3.
3. Review keyboarding techniques.

Friday

1. Quiz/test covering learned keyboarding information covering lessons 1-3--parts of machine (Appendix I).
2. Completion and review of Lesson 3.
3. On the last day of the week have the students self-assess the work accumulated in the work-in-process portfolio--lessons 1 through 3.
   A. The students will place the two best selections with a paper clip in the teacher's in-basket.
   B. All other completed daily work will be stapled and placed behind the student's selections.
   C. After the teacher has examined and recorded the students' work, the student can remove the work not selected for the finished portfolio.
   D. Those pieces chosen will be retained in the finished portfolio for growth comparison and the end-of-year finished portfolio to accompany the student to the next level of a business application class.

WEEK 2--September 5-8

Monday--Legal Holiday--school not in session

Tuesday

1. Introduce Lesson 4.
2. Timed writing explanation and practice.
   A. Students will take the first one-minute timing of the school year.

i. The teacher will instruct the students on calculating speed.

ii. The student places this timing in the right pocket of the finished portfolio.

B. The teacher will explain the purpose of charting and goal setting in regard to improving skill in timed-writing assessment.

3. When students take weekly timed writings, the students will chart timed writing progress on teacher-made chart (Appendix O).

Wednesday

1. Explain and give a copy of the technique sheet the teacher will be using for assessing the students' techniques beginning in Lesson 6 (Appendix G).

2. Introduce the new key strokes in Lesson 5.

3. Explain to students in detail what constitutes an error.

Thursday

1. Lesson 6--Clinic--Practice Lesson

A. The teacher will record on the first Technique Observation Checklist (Appendix G), and the students in the targeted class will be given a copy of individual performance to review and place in student's finished portfolio (Appendix P).

B. At every six-lesson interval there is a clinic lesson. On these days the teacher will observe

students' techniques and record the students' progress on the checklist.

2. Students will monitor the progress of the Observation Checklist.

Friday

1. Quiz will be taken on calculating the margins for formatting material (Appendix J).
2. Any student not passing the calculation of margins will retest until the test is passed.
3. Introduce new keystrokes in Lesson 7.
4. Self-assess work accumulated in work-in process portfolio folder. Select two best pieces and paper clip on top of all weekly work. Submit to teacher.
5. As in Week 1, this procedure will take place each Friday.

WEEK 3--September 11-15

Monday

1. The students are given the first semester rubric for timed writings (Appendix Q).
   A. This rubric is placed in the students' finished portfolios for growth charting.
   B. The students' self-assessed weekly work is returned and students place selection(s) in finished portfolio.
2. Completion of Lesson 7 and introduce Lesson 8.

Tuesday

1. If Lesson 8 has been completed, begin Lesson 9 introducing new keystrokes and reviewing technique checkpoint.
2. Practice one-minute timed writings. These will be placed in work-in-process portfolio folder.

Wednesday

1. Completion of any unfinished Lesson 9 and introduction of Lesson 10.
2. Practice timed writing.

Thursday

1. Completion of Lesson 10; introduce Lesson 11.
2. Instruct students on correct spacing procedures when using punctuation.

Friday

1. Lesson 12--Clinic--Technique Observation Checklist will be implemented by the teacher.
2. Students will self-assess work in work-in-process portfolio folder covering lessons 7-11 and submit work to teacher for assessment.
3. Quiz covering the calculation of words a minute and circling uncorrected errors on timed writings (Appendix E).
4. Any student not passing the quiz on WAM will re-test until the test is passed.

WEEK 4--September 18-22--QUARTER 1--MID-TERM WEEK

Monday

1. Student/teacher typewriter technique conferencing will begin today. Goals sheets will be completed by the students and the teacher (Appendix R).
2. Completion of Lesson 12 if necessary.
3. Introduce Lesson 13.
   A. First teacher-scored timed writing is placed in students' finished portfolios.
   B. This is the students' baseline timed writing to use for comparison on timed-writing progress.

Tuesday

1. Introduce Lesson 14. Formatting for horizontal centering is presented.
   A. Students will place first centering job in work-in-process portfolio folder for future self assessment.
   B. After completion of numerous horizontal centering jobs, students select best work for teacher assessment using job rubric (Appendix S).
   C. After student receives assessed work from teacher, the student will place selections in left-side pocket of finished portfolio.

Wednesday

1. Introduction of Lesson 15. Students' first two-minute timed writing.

A. Students compare the speed and accuracy to the one-minute timing and rubric in student's finished portfolio.

B. After the teacher has recorded the timing, the student places the timing in the right pocket of the finished portfolio.

2. Students have four centering jobs to accomplish.

A. These jobs are placed in work-in-progress portfolio until complete.

B. The students then select the one that best represents the centering technique.

C. Selection is paper clipped to other three and place all work in teacher in-basket for the teacher to check students' progress.

3. Students receive the work back.

A. Selection will be placed in the students' finished portfolio.

B. Students will be encouraged to take the other three home.

Thursday

1. Lesson 16--students will be taught the format for vertical centering.

A. Students will be assigned two vertical centering jobs to complete.

B. Extra practice material will be made available at completion of this work.

2. The teacher will continue conferencing with the students.

   A. Using the technique checklist, the teacher and student will discuss the progress to date.

   B. Both teacher and student will record goals the student will try to attain by the next conference which is at the eighth week.

3. Teacher/student conferences must be completed.

Friday

1. Quiz on proper spacing related to usage of punctuation at the keyboard (Appendix L).
2. Students will be granted time to finished any incomplete work.
3. Practice exercises will be available for student use.

CYCLE

The above cycle will take place at every four-week interval in order for both the teacher and student to assess the work completed and to establish goals for the next four-week cycle.

Method of Assessment--Keyboarding I

Based on the action plan developed for these targeted keyboarding students, the following assessment criteria will be implemented: keyboarding technique observation check-list, timed writings, daily keyboarding jobs, proofreading skills, and student-created portfolio.

Chapter 4

PROJECT RESULTS

Historical Description of Intervention--English

The objective of this project was to increase the writing ability of at-risk students. The implementation of portfolio assessment, the employment of peer and student-teacher conferencing, and the establishment of learning centers were selected to affect the desired changes.

Learning centers were established before the first day of school. The room was arranged so the following areas were clearly defined: supplies and materials, student-teacher conferencing, writing, and displayed (finished) writing. When school began, students were informed of these areas and what to do in each one through the use of mini-lessons during the first week of school.

The class routine followed a true writers' workshop at the beginning of the intervention. The class began with a five- to eight-minute period called status of the class. During this time, each student reported to the teacher what would be worked on that day.

Next came the mini-lesson. This was to be about five to eight minutes long, but usually ended up taking longer.

The mini-lesson averaged fifteen minutes in length. Many things were accomplished during mini-lessons. As previously stated, instruction was given in how to use each area of the classroom, how forms like the assessing rubric would be used, how to peer conference, and how to revise and improve different pieces of writing.

After the mini-lesson came the writing time. This was twenty to thirty minutes in length. Students were responsible for writing on the piece chosen during status of the class. If problems were encountered with their writing, the teacher was available for assistance. On the first day of class, students were assigned to brainstorm as many topics as possible to use for writing. This list was stapled in their work-in-progress portfolio to be available when a new topic to write on was needed.

The last ten to fifteen minutes of the class was available for group sharing. Students could choose to share their writing with the class. If there was a problem or question that students needed assistance with, it could be addressed then also in a large group setting. This was the time that was shorted the most often. Two factors were thought to influence this observation:

1. This was the last part in workshop. If the other parts took longer, then naturally this part would be shortened.

2. Students were reluctant to share their writing with other students, so no demand was made to include this part.

The library was utilized once a week during the intervention. Students were then able to research any topic needed.

During the fourth week of school, the implementor began to notice that modifications needed to be made in the action plan. The status of the class was becoming a talk time unless that was the particular student who was being addressed by the teacher. In order to correct the problem, the implementor chose to use a status of the class form. This provided the written documentation of what the student was accomplishing all week and alleviated the talk time problem at the beginning of class. Now the students came into class, got their work-in-progress folders, wrote down what was to be accomplished that day and began. At the end of each week, the teacher and student would sit down and review the status-of-the-class form and work accomplished. The modification also had an added benefit of keeping the student and teacher informed of missed work because of absences.

Another area of concern was the writing time. Students had exhausted the topic list. Much time was spent talking with other students or reading the newspaper. The implementor made the decision to begin assigning writing topics

from writing magazines, controversial topics like dress codes for schools and from the reading of newspapers, magazines, and in class novels. Students were content with this decision and did not complain. Group sharing became more involved after this time because the discussion centered on one topic.

Peer conferencing was discussed during the first week of school. During the third week of school, each student chose one paper and had a peer edit the paper.

The implementor decided that a formal student-teacher conference would take place once during the intervention. At the end of twelve weeks, each student chose one written piece from the work-in-progress folder. This piece went through a peer-conference, student revision, and was then typed. A individual student-teacher conference was held. A conferencing form was used to evaluate what writing skills the student possessed and what skills needed to be worked on.

Two portfolios were established for each student. A work-in-progress folder was used for any piece of writing the student did. The finished work folder contained only the written pieces a student had taken through a peer- and student-teacher conference. Most were typed. These pieces were considered the student's best work were used to show the student's progress in writing.

Presentation and Analysis of Results--English

In order to assess the intervention strategies used to motivate at-risk students, writing samples were evaluated through standardized test scores, student-teacher conferencing and portfolios.

Table 5

Woodcock Johnson Revised Standardized Test

Writing Sample Subtest

Student I. D.	Pretest	Postest	+/- Months
1	5.9	10.0	+37
2	7.0	10.0	+27
3	3.9	4.4	+5
4	7.0	5.6	-13
5	7.6	11.7	+37
6	6.3	11.7	+49
7	3.3	Dropped out	X
8	11.7	16.9	+47
9	4.4	13.6	+83
10	13.6	16.9	+30
11	2.4	3.0	+6
12	6.6	5.6	-9
13	5.6	7.0	+13
14	2.0	2.8	+8
15	7.6	12.7	+37
Average	6.3	9.4	+25.5

In comparing the pre- and post-test results of the intervention on the writing samples, the scores showed an

increase for all students but two. One student was not listed in the results because of dropping out of school. On the pre-intervention test, the highest grade equivalent score was 13.6, the lowest 2.0 with an average score of 6.3. On the post-intervention test, the highest grade equivalent score was 16.9, the lowest 2.8 with an average score of 9.4. The lower level students showed less of a gain than other students.

Eighty-four percent of the students showed a gain in the writing sample. Twenty-eight percent gained 0-18 months growth, 14 percent gained 19-36 months growth, and 42 percent gained over 37 months growth. The average months gained in writing samples during the intervention was 25.5 months growth.

The students' finished pieces from the portfolios were evaluated during student-teacher conferences. Discussion between student and teacher began with why the student had chosen that particular piece of writing to use as a finished piece. Answers varied from, "It was an important part of my life this summer" to "It was the longest thing I wrote." Next the student was asked which areas of writing they did well on and which areas needed improvement. Answers were recorded and the implementor added to each. The rubric was then used to score each paper.

Figure 1 compares the results of the pre-intervention observation checklist to the rubric used in post-intervention

conferencing. All areas showed improvement. More students were successful in the following areas: the number of students able to write topic sentences increased by 13 percent, the number of students using complete sentences improved by 46 percent, the number of students with a wider vocabulary went from 0 to 21 percent, the number of students using capitalization and punctuation correctly increased 17 percent, and the number of students showing correct spelling had the smallest gain with only a 2 percent increase from pre- to post-intervention.

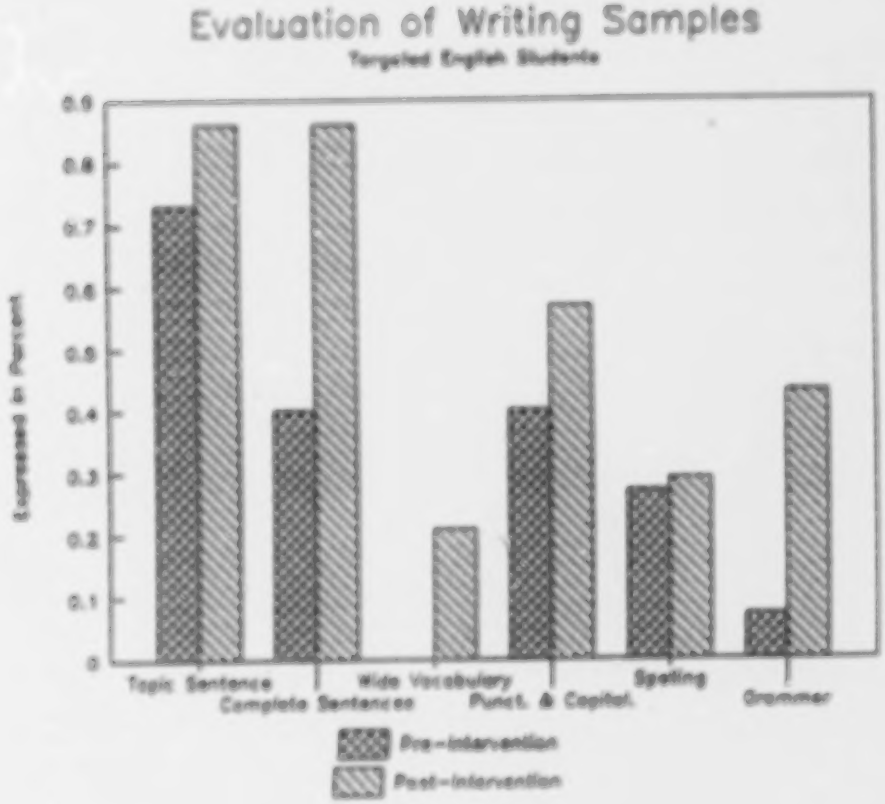

Figure 1

As previous stated in chapter 2, spelling is an area of difficulty for many learning disabled students. This may be the reason that spelling showed the smallest gain.

At the beginning of the intervention, students were very hesitant about writing. Many experienced what is known as "writer's block" or just did not know what to write about. This is where the topic sheet that had been produced by the student on the first day of school was used to stimulate their writing. More than anything, the implementor felt the students were just not comfortable expressing their ideas on paper. Many years of built-up frustration and anxiety at having their papers returned all marked up had stifled the student's ability to write. They were not willing to risk writing.

Through much coaxing and then praise by the implementor, students began to take risks and write. During conferencing, the positive parts of the paper were looked at first and only one or two of the negatives were discussed. Students had input during the evaluation process and discussion could take place with the teacher about how to improve in an area of writing that the student was having trouble in.

By the end of the intervention, students were much more willing to share their thoughts and ideas on the topics they had written about. The students wrote more freely and had less trouble with "writer's block."

The intervention was a success. The overall result of the strategies used resulted is an increase in student's writing ability demonstrated by an increase in test scores and observable behavior.

Conclusions and Recommendations--English

Clearly the intervention had a positive effect on students' writing ability, which would in turn improve their academic achievement. The skills necessary to become a better writer improved through the use of a writer's workshop. Mini-lessons to correctly teach problem areas for students transferred into their daily writing. The peer- and student-teacher conferencing allowed the student to revisit and revise the writing several times. This was felt to improve the quality of the paper. Portfolios kept all assignments together in one location for the student. This also allowed the student the opportunity to see where mistakes had been made in the past and how their writing had improved or grown over a sixteen week time period. During the intervention, some problems became apparent and changes were made.

The students did not respond well to choosing their own topics. Even though we had made a topic list before writing began the students seemed to not be able to focus on the goal. It may have been because of the fear of failure or they had never been allowed to chose their own topic or a combination of the two. To remedy this problem in the future, I would start with specific topics in the beginning

then gradually to more general topics. I think this would cause less of a dramatic shift for the student.

Changing from a verbal to written format for status of the class worked better. It took less class time and the students were ready for the mini-lesson at the beginning of class. The added benefits were a written log of what each student had done for my records and more time for group sharing. Another possibly that was proposed but never tried was to use a journal stem at the beginning of class. Then the status of the class could be kept in a verbal format. Lastly, I would recommended that the implementor set a specific number of papers to be taken to final form in a nine-week time period. I did not choose to do that because I was unsure how many would be an appropriate number and did not want the students to feel pressured into accomplishing more than they could handle. I now feel this would have kept everyone more focused.

Writing daily for a purpose instead of the drill and practice sheets students were accustomed to positively effected student's writing ability. These skills can be used by students throughout the school curriculum to achieve academically.

Historical Description of Intervention--Keyboarding I

The objective of this project was to improve the academic achievement of at-risk students. The implementation of a work-in-process and a finished portfolio, along

with technique-observation checklists, and goal setting strategies were selected to affect the desired changes. These strategies were selected to attempt to create an organized classroom of students working on-task to achieve academic success.

The action plan was implemented in September during the second week of the school year. The plan was followed closely, but the teacher was not able to cover the classroom work as quickly as planned. The action plan covered four weeks and recycled for fourteen additional weeks. This eighteen-week period encompassed the first semester of the school year. The intervention was implemented for the entire school year; data collection terminated at the conclusion of the eighteen-week period.

The teacher/researcher had the students complete a survey on previous knowledge and experience at the keyboard (Appendix M). The survey gave insight into the number of students who had previous usage of the keyboard, formal or informal, at what age the students began using the keyboard, and if the students had been exposed to any previous keyboarding instruction. In addition, the class rules and expectations form (Appendix N) was distributed for the students' and parents' reading and signing. The teacher placed the returned, signed coupon on file.

The teacher had four keyboarding I classes that were being instructed in the same methods. Each class was given

a specific class color for the work-in-process folder and a different color for the finished portfolio. Both of these folders were left in the keyboarding room. Crates were set up for the students to file the folders. Appendix T is a copy of a picture of this arrangement. All classroom work was placed in the work-in-process folder. The teacher had created a finished portfolio from the previous academic year, and this portfolio was shown to the students as a model.

At the end of each week, students would self-assess the week's work. The students were responsible for the completion of the week's work, but the students would choose the two best representations for the week and paper clip those selections on top of the week's packet. After teacher observation of the work, these selections were then transferred to the finished portfolio. This process occurred throughout the intervention period. As the semester progressed, this work was replaced in the finished portfolio with representations of formatting jobs the students had completed: centering (vertical, horizontal block), enumerations, informal notes, letters, envelopes, reports, and table.

As the next step in keyboarding development arrived, a teacher-made timed writing chart was distributed to the students. In order for the students to monitor progress on these specific areas of keyboarding development, the

students were given the charts to record weekly timing rates (Appendix O). The best timed writing score for that week was then charted by the students.

Initially, the teacher intended to utilized the teacher technique-observation checklist at the end of lessons 6, 12, 18, and 24; but, instead, the teacher implemented the checklist four times during the intervention period rather than every six lessons. The teacher made this change so the observations would be recorded for grading at the two midterm reports and end-of-quarter reports. Observing the students every six lessons would have been extremely time consuming and the teacher realized the difficultly in observing the students so often. Therefore, observation was done at approximately the fourth, eighth, twelfth, and sixteenth week of the intervention period. Copies of the checklist (Appendix G) were made by the teacher, and each student's score was recorded by the student on an individual checklist for reference (Appendix P). The students maintained the record in the finished portfolio. At each interval, the student updated the sheet.

The student and teacher then used this observation checklist for conferencing. Rather than individual verbal conferences, a goal sheet (Appendix R) was distributed to each student. The student studied the scoring listed on the technique checklist and wrote an appropriate goal to work on over the next four-week period of time. These goal sheets

were submitted to the teacher and the teacher agreed with the student's goal or added an additional goal that was also seen as needing attention. These sheets were returned to the student the next day to begin the process of meeting this/these goal(s). This procedure deviates from the intended action plan. Because of time involvement in face-to-face conferencing and the monitoring of classroom behavior while conferencing, the change from a verbal conference to a written goal sheet conference was implemented. The students responded to this procedure and insightful information was acquired by the teacher.

At the end of the next four-week period of time, the goal sheets were taken out and the students typed a short statement on the goal(s) set by the student and the teacher. The students were expected to respond to and assess goal achievement. Again, these were submitted to the teacher for a comment and observation notation. A new goal sheet for the next four-week time frame was completed by the students and teacher. These goal sheets accumulated in the finished portfolio for future reflection by the students.

The portfolios were punched and assembled for teacher assessment at the ninth and eighteenth weeks. The keyboarding book is divided into daily lessons which have from one to four keyboarding jobs per lesson. The teacher gave the students a list of jobs and/or lessons to select representation of work for the finished portfolios. This method gave

both the teacher and student input into the portfolio. The teacher's input was felt necessary so the student would have a broad representation of work tasks completed, and the student's selections were vital for ownership to occur. The teacher would direct what lessons to choose from and the student would then make selections from those lessons. After the assembly was complete, the teacher assessed the student's process and recorded these data on the student's goal sheet. The grading of the portfolio was based on a rubric of neatness and completeness of necessary entries.

The implementation of portfolio creation, written conferencing, and new goal setting proceeded for the remainder of the intervention.

Presentation and Analysis of Results--Keyboarding I

In order to assess the intervention strategies used to improve the academic achievement of the targeted at-risk students, teacher records were kept on keyboarding techniques, timed writings, proofreading skills, and portfolio assessment. The baseline assessments presented in chapter 2 included the keyboarding technique checklist and four short tests covering initial material learned in the keyboarding classroom. The material that was covered in these tests is integrated into the keyboarding tasks the students must produce as the year progresses. Therefore, the analysis that follows in this chapter covers the same material but analyzes the students success in using this knowledge in performing keyboarding jobs.

When the students perform timed writings, calculation of words a minute must take place. By the end of the intervention time, 100 percent of the students were able to complete this requirement.

Likewise, when the students are formatting a job, the left and right margins must be calculated. Again, by the end of the intervention all keyboarding students had successfully accomplished this procedure. Spacing correctly for punctuation was observed in scoring the student's work, and the successful application of this knowledge is reflected in the job figures presented later in this chapter.

Table 6 shows the four times the students were observed for keyboarding techniques. The first column shows the pre-intervention score and the next three scores document observations that took place after the intervention strategies had begun.

Of the 22 students observed three times after the introduction of the intervention, 55 percent raised the technique average over the pre-intervention observation, 18 percent stayed the same, and 27 percent decreased in the keyboarding techniques observed.

Of the six students who had lower averages, it is interesting to note that three students dropped three points off the pre-intervention observation, one student dropped one point, another student dropped four points, but the most dramatic drop was 13 points. The student originally had

scored 33 points but dropped to 20 points for an average. This student was advised at the end of this intervention period to withdraw from the class due to poor achievement. The student has continued having difficulties in school; the student has been suspended on three separate occasions.

The teacher/researcher recommended to the student and parents to re-enroll in keyboarding the following academic year. The student's skills were so low that second semester's work load would have been very stressful and difficult to complete at the level of achievement acquired by the student.

The other five students progress has been adequate. Even though the keyboarding techniques skills of these students declined, achievement level has been satisfactory.

Another area of assessment during the intervention period was the students' timed writings. In the following table, a comparison is made from the students' baseline timed writings to the timed writing administered at the end of the intervention.

Table 6

Teacher Observation Keyboarding I Technique Checklist

Pre- and Post-Intervention

Expressed in Percentage of Correct Skills

I.D.	Pre	Post	Post	Post	Post Avg.
A1	58	92	89	100	94
A2	92	100	89	86	92
A3	83	92	81	92	89
A4	75	58	61	81	67
A5	86	81	81	75	78
B2	61	78	86	72	78
B3	75	81	97	86	89
B4	86	86	94	83	89
B5	69	75	69	72	72
C1	92	83	83	86	83
C2	83	100	97	92	97
C3	47	86	86	67	81
C4	83	86	81	78	81
D1	94	100	94	89	94
D3	56	58	69	78	69
D4	100	100	100	100	100
E1	92	83	92	83	86
E2	97	86	97	75	86
E3	75	78	67	83	75
F1	92	67	58	42	56
F2	72	97	100	100	100
F3	61	61	83	64	69
Avg.	81	86	89	86	86
Median	83	89	89	83	86

Table 7 timed-writing data shows clearly that improvement for 77 percent of the students occurred during the intervention. Three students', or 14 percent, timed-writing letter grades did not move from the beginning of the academic year to the end of the intervention, and two students, or 9 percent, had a decrease in the level of timed-writing achievement.

On the timed-writing charts provided the students (Appendix O) are the scales used to access the students' timed writing work. Each quarter of the school year the charts change. In order to maintain the same letter grade each quarter, the student's score must move at least five words a minute. Therefore, using the scoring 5 = A, 4 = B, 3 = C, 2 = D, and 1 = F, not only did the students' speed increase during the intervection, but the scores went from an average of 2.76 (D+) to a 3.64 (B-). This improvement was substantial and must be attributed to improved keyboarding techniques.

Table 8 presents a review of the pre-tests analyzed in chapter 2. This table shows the number of students receiving "A", "B", "C", "D", and "F" grades on the four weekly teacher-made tests. The targeted class began with 23 students. One student moved from the district early into the research project and this student has been removed from this table. Comparing this table with figure 2 shows the number of targeted students that showed improvement in class work over the intervention period.

Table 7

Timed Writings (TW) Growth Records

Expressed in Letter Grades

I.D.	Baseline TW	Ending TW
A1	A	A
A2	B	A
A3	D	D
A4	D	C
A5	D	C
B2	C	D
B3	D	C
B4	F	C
B5	D	B
C1	F	B
C2	D	A
C3	D	C
C4	D	C
D1	D	B
D3	B	C
D4	B	A
E1	C	A
E2	B	A
E3	B	A
F1	F	F
F2	C	B
F3	D	C
Average	D+	B-
Median	D	B

The scores received on end of quarter one jobs are exceptionally higher than the pre-test scores. The scores at the end of quarter two are considerably lower than quarter one, but the students' numbers are still more positive than on the pre-tests conducted. The results were encouraging to the researcher/teacher.

Table 8

Pre-Intervention Weekly Tests

	Number of Students Categorical Scores Pre-Tests and Post-Tests					
Score Categories by Percent	Tst 1	Tst 2	Tst 3	Tst 4	End Qtr 1	End Qtr 2
100 - 94 = A	9	7	6	4	13	2
93 - 87 = B	4	0	4	4	5	7
79 - 86 = C	2	0	3	2	2	8
70 - 78 = D	4	2	3	6	1	2
69 - 0 = F	3	13	6	6	0	3
Mean Score	84%	93%	84%	70%	2.98 = C-	3.12 = C
Median Score	90%	50%	85%	75%	4.89 = A-	3.4 = C

Number of Students = 22
Tst = Test

In figure 2, the data strongly shows a dip in academic performance in the scores on the formatting jobs from quarter one to quarter two of the implementation of the intervention.

On quarter one jobs, 59 percent submitted "A" work versus 9 percent on quarter two jobs. The "B" range of

student performance went from 23 percent quarter one to 32 percent quarter two. In the range of "C," quarter one only had 9 percent receiving a "C," but the quarter two saw a significant increase to 36 percent. On quarter one, only 9 percent fell into the "D-F" category. Unfortunately, at the end of quarter two, the number of "D-F" grades rose to 23 percent.

Figure 2

This dip in performance can be attributed to a number of factors:

1. The level of job difficulty at post-test intervention which was at the end of the second quarter versus pre-test intervention at the end of first quarter is much greater.
2. The amount of work covered in second quarter escalates over first quarter which puts stress on the students' time element. The students must step up the speed of finishing work and therefore, some students do not allow time to perform proper proofreading and correction procedures.
3. In this targeted class of students, the lack of ability to transfer material learned to similar tasks was very evident to the teacher/researcher. Formal instruction would take place as each new formatting procedure occurred. Practice material would then be assigned and teacher assistance would always be available. Later in the grading period, the students would have to revisit these formatting rules by doing additional jobs and, unfortunately, retention of previous knowledge and transfer of previous learning experiences did not come easily to the students. This lack of retention and/or transfer attributed to lower academic success.
4. The students are always permitted access to previous lessons from the classroom textbook and previous work found either in the students' work-in-process folder or finished portfolio. Lack of motivation seemed evident

in the observation of students not willing to reflect back on these materials.

So often, the students want to rely on the teacher parroting each step as the tasks are performed. In the process of doing this research project, the teacher/researcher found this was an area of concern by the faculty. This "spoon feeding" procedure by this teacher/researcher was curtailed; this was displeasing to these targeted students. In order for mastery of skills to occur, revisiting and metacognition must take place. Further encouragement of the students' usage of these skills of reflection and searching out the needed information continued.

In the area of proofreading skill assessment, figure 3 indicates a significant improvement in skill development from pre- to post-intervention. The pre-intervention proofreading assessment is in Appendix K and shows as test 3 on table 8.

As clearly shown in figure 3, the distribution of percentages on the pre-intervention test was fairly consistent among "A", "B", "C", and "D." There were no "F" grades. The "A" and "C" grades registered 27 percent, and the "B" and "D" grades registered 23 percent.

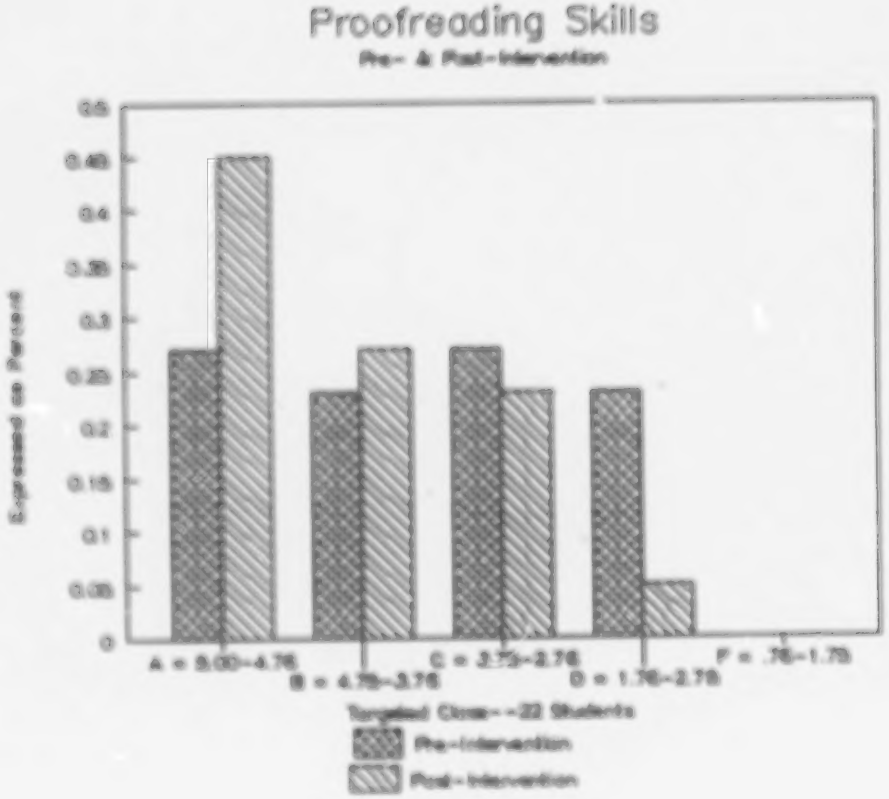

Figure 3

The post-intervention assessment, indicates proofreading skill attainment. The "A" grade jumped to 45 percent, "B" grades rose to 27 percent, "C" dropped three percentage points to 23 percent, and the "D" range dropped dramatically to 5 percent. Again, there were no "F" grades. This was very exciting to the teacher to realize the substantial improvement that was gained by the students' achievement in proofreading skills.

The final assessment for the period of intervention is the finished portfolio. Over the intervention period, the

students performed many tasks at the keyboard. The teacher recorded each lesson, and at midterm, the end of quarter one, second midterm, and the end of quarter two distributed to the students a list of lessons and jobs. For some lessons, the teacher required a specific job be included in the portfolio, but for other lessons, the students had the freedom to self-assess and select jobs to include in the portfolio.

Table 9 shows the numeric score each student earned both first and second quarter on this portfolio. A perfect score was 50 points. The grading of these portfolios was based on completeness of entries and neatness in assembling the portfolio. Both the median score and the average score were higher for quarter one than quarter two. Also, more students scores dropped from quarter one to quarter two. This was disappointing to the teacher/researcher. The teacher had anticipated more pride in the work done on the portfolio but, instead, less interest was expressed in the portfolios as the school year progressed. Seven students' grades remained constant: five earning 50 points both quarters; one earning 40 points both quarters; and one, unfortunately, receiving zero both quarters. The last student dropped the class at the end of the semester due to lack of academic achievement and poor keyboarding skill development.

Table 9

Portfolio Assessment

End of Quarters 1 and 2

I.D.	Quarter 1	Quarter 2	Same	Up	Down
A1	45	50		+5	
A2	50	50	X		
A3	50	45			-5
A4	25	40		+15	
A5	35	40		+5	
B2	35	30			-5
B3	25	50		+25	
B4	45	45	X		
B5	35	40		+5	
C1	50	50	X		
C2	50	50	X		
C3	10	0			-10
C4	45	40			-5
D1	50	45			-5
D3	40	43		+3	
D4	50	50	X		
E1	50	45			-5
E2	50	48			-2
E3	50	40			-10
F1	0	0	X		
F2	50	50	X		
F3	50	38			-12
Average	40.45	40.41			
Median	50	45			
Total Student Changes			7	6	9
Points Portfolios Went Up				58	
Points Portfolios Went Down					59

Based on these data, the finished portfolio did not seem to be an effective intervention to improve the academic achievement of at-risk students.

Conclusions and Recommendations--Keyboarding I

Reviewing the semester grades earned by the targeted students: 9 percent received grades of "A," 55 percent received grades of "B," 27 percent received grades of "C," 4.5 percent student received a grade of "D," and 4.5 percent received a grade of "F". These grades indicate 91 percent of the targeted class were increasing the on-task time to achieve academic success. This is very positive feedback. In looking through the data collected, the strategies implemented met with measurable success. Students' keyboarding techniques, timed writing ability, proofreading skills, and semester grades indicated that most of the students had increased on-task time to improve academic achievement.

The improvement in the students timed writing skills was substantial and must be attributed to improved keyboarding techniques. The teacher's strategy of evaluating the students' keyboarding techniques, communicating these scores to the students, and the students setting achievable goals impacted the success of these students.

When all the data is examined, the overall picture is very positive, and, therefore, makes the researcher more optimistic about the outcome of the portfolio grades.

The plan that was put into effect in the targeted class of at-risk students was also implemented in the other three sections of keyboarding I. These classes also benefitted and realized more success in developing keyboarding skills.

Working on a day-to-day basis with these targeted students masked the success the strategies were effecting. Only after reflection of past performance of at-risk students and an analysis of collected data was the success of the strategies made clear.

If a similar strategy were being considered by a classroom teacher, I would recommend drawing up the rules and expectation form as a class rather than by the teacher. When the students create the rules and consequences, ownership takes place and classroom behavior is more positive.

The timed writing charts were an effective way to monitor progress from week to week. This teacher should have spent more time directing the students to chart weekly work rather than expect them to do the charting without teacher supervision. For this strategy to be effective and reflective, the charting needed to be consistent. Often times when a grade is not assigned to a task, the student forgets to get the assignment completed.

The keyboarding classes' student population in the targeted high school are predominantly of freshmen status. Often these young students' organizational skills are weak. The work-in-process folders that were provided by the school district were very helpful in organizing the students who

were weak in this area. These folders remained in the classroom and had a beneficial impact on academic achievement because loss of class work completed but not yet submitted to the teacher was minimal. Note sheets and weekly assignment sheets were also stored in these folders for quick reference by the students also. Paper and a writing instrument could also be stored in the folder eliminating unpreparedness for class activities.

The strategy related to portfolio creation that generated the most success on this targeted class of students was the written goal setting by student and teacher. The students took this responsibility very seriously and worked to meet these goals over the four-week period of time. The teacher eagerly responded to the goals set and also added additional goal(s) if needed. These goal sheets were discussed and referred to often in class with the intention of keeping the students focused on attaining these goals. After the four-week interval, reflection took place on progress toward goal attainment. The students' action plans to accomplish the goal(s) in the next four-week period of time were assessed. Great success was realized by both the students and the teacher with these goal sheets.

The students expressed satisfaction in the grading process of self-assessing and ordering the work for the teacher's assessment. Students recognized that bad days can occur without panic and devastation, lack of understanding

and incorrect formatting of jobs can happen without failure, but finally mastery takes place and the reward of an achieving grade is still obtainable.

The culminating outcome of the project was the finished portfolio. Some students looked at the portfolio initially as just another assignment; but as the year progressed, students developed pride in this collection of work and valued the worth of knowledge and effort that was accumulating in the folder.

In conclusion, the success of the goal setting, self-assessing, and portfolio creation was a valuable experience to the targeted at-risk students and the teacher. This strategy improved the academic achievement of the keyboarding I students at the targeted high school.

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APPENDICES

WRITING SURVEY

Name_____ Date_____

1. Are you a writer?_____
[If your answer is YES, answer question 2a. If your answer is NO, answer 2b]

2a. How did you learn to write?_____

2b. How do people learn to write?_____

3. Why do people write?_____

4. What do you think a good writer needs to do in order to write well?_____

5. How does your teacher decide which pieces of writing are the good ones?_____

6. In general, how do you feel about what you write?_____

OBSERVATION CHECKLIST

Teacher: _____ Class: _____ Date: _____

Target Skills: _____

Ratings:
- ● = Frequently
- / = Sometimes
- ○ = Not Yet

NAMES OF STUDENTS	Topic Sentence/ Conclusion	Complete Sentences	Structure/ Style	Vocabulary/ Usage	Capitalization/ Punctuation	Spelling	Grammar	COMMENTS
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								

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Appendix C - Woodcock Johnson Revised on Written Language Skills

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DOCUMENT RESUME

ED 398 597 CS 213 434

AUTHOR Klinger, Barbara; Nelson, Denise
TITLE Improving Academic Achievement of At-Risk Students in English Education and Keyboarding I.
PUB DATE May 96
NOTE 119p.; M.A. Project, Saint Xavier University.
PUB TYPE Dissertations/Theses - Undetermined (040) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Academic Achievement; Action Research; Cooperative Learning; *High Risk Students; High Schools; *Portfolio Assessment; Rural Education; *Student Behavior; Student Empowerment; Student Motivation; Teacher Behavior; Writing Research; *Writing Workshops

ABSTRACT

This report describes a program for improving the on-task behavior of at-risk students to increase their academic achievement. The targeted population consisted of high school students in a growing middle-class community located in a rural area of a midwestern state. The problems of academic under-achievement were documented through data including teacher-made tests, standardized tests, subject area progress reports, and teacher observation checklists. Analysis of probable cause data revealed that students' low achievement was related to low/no motivation, poor work habits, low self-esteem, and continuous academic failure. Faculty discussion revealed that students failed to stay on task and did not accurately complete assignments. Review of instructional strategies revealed an over emphasis on information giving by teachers. A review of solution strategies and an analysis of the problem setting resulted in the selection of the following interventions: the use of a writer's workshop and the use of portfolio assessment and student self assessment. As a result of implementing writer's workshop, cooperative learning, and portfolio assessment, at-risk students showed measurable improvement with on-task behavior. This improvement resulted in successful academic achievement for the targeted at-risk students. (Contains 52 references, and 9 tables and 3 figures of data. Appendixes present survey instruments, checklists, rubrics, and teacher-made tests.) (Author/RS)

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IMPROVING ACADEMIC ACHIEVEMENT OF AT-RISK STUDENTS IN ENGLISH EDUCATION AND KEYBOARDING I

By

*Barbara Klinger
*Denise Nelson

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Submitted in partial fulfillment of the requirements for the degree of Master's of Arts in Teaching and Leadership

Saint Xavier University & IRI/Skylight
Field-Based Master's Program

Action Research Project
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Abstract

Authors: B. Klinger
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Site: Winnebago

Date: May 1996

Title: Improving Academic Achievement Of At-Risk Students

This report describes a program for improving the on-task behavior of the at-risk students in order to increase their academic achievement. The targeted population consisted of high school students in a growing middle-class community located in a rural area of a midwestern state. The problems of academic under-achievement were documented through data including teacher-made tests, standardized tests, subject area progress reports, and teacher observation checklists.

Analysis of probable cause data revealed that students' low achievement was related to low/no motivation, poor work habits, low self-esteem, and continuous academic failure. Faculty discussion revealed that students failed to stay on task and did not accurately complete assignments. Review of instructional strategies revealed an over emphasis on information giving by teachers.

A review of solution strategies and an analysis of the problem setting resulted in the selection of the following interventions: the use of a Writer's Workshop and the use of Portfolio Assessment.

As a result of implementing Writer's Workshop, Cooperative Learning, and Portfolio Assessment, at-risk students have shown measurable improvement with on-task behavior. This improvement has resulted in successful academic achievement for the targeted at-risk students.

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Chapter 1

PROBLEM STATEMENT AND CONTEXT

General Statement of Problem

The students of the targeted school underachieve in academic areas. Evidence for the existence of the problem includes teacher-made tests, standardized tests, subject-area progress reports, and teacher-observation checklists.

Immediate Problem Context

The targeted high school of grades 9-12 is located in a rural midwestern setting. The student population at the end of the 1994-95 school year was 398 students which is an increase of 29 students since the 1994 School Report Card figures were tabulated.

The racial composition of the student population is: Caucasian 99.5 percent; African-American 0.0 percent; Mexican-American 0.3 percent; Asian-American 0.3 percent; and Native-American 0.0 percent. The operative expenditure per pupil is $3,915. The attendance level at the targeted high school is 93.3 percent. The chronic truancy rate is 0.3 percent and the student mobility rate is 14.9 percent. The percentage of students that come from low-income families is 8.4 percent (State School Report Card, 1994).

The school has 29 teaching staff which includes a counselor and two teacher's aides. Seventeen of the teaching staff are females and all members of the staff are white. Eleven of the 29 have a Master's degree or higher, six are in the process of completing a Master's degree, and there is one teacher who does not hold a degree. The average number of years in the district is 13.3 years. The average salary of classroom teachers is $32,587. The administrative staff is composed of one principal and two office secretaries.

The graduation requirements from the school are: English--four years, science--two years, math--two years, social studies--two years, physical education--three years, and career education/resource management/health--each one semester. Other areas students may elect to study are: Art, automotive, band, business, chorus, computer science, foreign language, human resources, manufacturing, and carpentry. There are learning disability and inclusion classes offered in instructional areas required for graduation. The extra-curricular activities attempt to address the interest of all students. These activities include: interscholastic academic teams, such as JETS team (Junior Engineering and Technology Society), math team, and academic team; athletic teams for girls, such as cross country, volleyball, basketball, soccer, track, cheer-leading, and poms; athletic teams for boys consisting of

cross country, football, basketball, wrestling, track, and baseball; extra-curricular dramatic performances such as three-act plays and musicals, and various other clubs and organizations including the Spanish club, pep club, class officers, and student council officers.

The 1994 School Report Card listed the average class size as 18.4 students, but the school population increased by 29 students during the 1994-95 school year and class sizes continue to increase because of the community growth. As class sizes have increased, staff have seen evidence of more under-achievement.

The Surrounding Community

The school district serves a rural community that is seven miles west of a large metropolitan area in the midwest. This village, in varying degrees, is dependent upon the goods and services that the metropolitan area offers. The land usage within the school district is as follows: 46 percent residential, 21.9 percent agricultural activities, 16.7 percent streets and alleys, 7 percent public and semi-public usages, such as churches, village offices, etc., 3.5 percent industrial, 2.6 percent parks and recreational space, and 2.3 percent commercial enterprises (Gearhart-Minick, 1994).

The community is composed of a 98 percent White population. The average price of a home is $69,750. The community has one federally-subsidized apartment complex.

Eighty-one percent of the residents of the community are high school graduates, and the median household income for this community is $36,544 (United States Census Report, 1990).

This community is highly supportive of the school district and essentially all school groups have a support group organized and managed by parents. Some examples are: Fans Club, Music Boosters, Foundation for Educational Excellence (FEE), and American Foreign Exchange System (AFS). There is a seven member Board of Education. Because the school district serves several townships, board members are elected proportionately from these different townships.

The community is experiencing extensive growth. The projected population increase, based on current growth and anticipated residential development, is 54 percent between the years 1990 and 2000. Due to this rapid growth, the Board of Education employed an educational consultant to conduct a Demographic and Facility Analysis (Norwood, 1992). Based on these findings, a referendum was placed on the April 4, 1995 ballot for the purpose of building and remodeling within the district. The referendum was defeated; therefore, class size will continue to increase, and student achievement may suffer.

Regional and National Context of Problem

The problem of under-achievement affects students who are "variously labeled 'at risk,' 'disadvantaged,' or

'educationally deprived'" (Means & Knapp, 1991, p. 282). A study of students at-risk was conducted by Phi Delta Kappan (1989). This project involved 22,018 students in 276 schools. One purpose of this study was to develop a scale to measure at-riskness (Frymier & Gansneder, 1989). The survey constructed an "at-risk scale". Of the 45 risk items, the analysis identified only five factors as significant. Of those five, only two could be dealt with by the school. Those two factors were personal pain and academic failure (Frymier, 1992). In 1989, Frymier reported that:

> Between 25 percent and 35 percent of the 22,018 students in this study are seriously at-risk. One of seven students had been retained in grade at least once. One out of seven failed at least one course last year. One out of six was at least one year older than the typical student in that grade in school (p. 144).

One concept that has been the basis of educational curricula is that "the basics" must be learned before more advanced ideas can be taught. Researchers in cognitive science question whether this is true. Most students who are found to be lacking in certain areas are pulled out to learn "the basics" and may never receive advanced skills (Means & Knapp, 1991).

One factor found to affect students' performance in school is the discovery of the ability to achieve (Kallick,

1992). Another factor found to affect students' achievement is class size (Pate-Bain, Achilles, Boyd-Zaharias & McKenna, 1992).

Students are "at-risk" because the educators are not addressing the needs of the students. The educators must start with what the students know and can relate to in their world. In this way the schools can broaden the students' knowledge of the higher order thinking skills (Barone, 1989).

Educators confess to lack of skill with, or confidence in, many of the approaches to working with at-risk students (Frymier & Gansneder, 1989). Teachers do not always have control over all the issues that need to be addressed. Education needs major changes and those changes will not be inexpensive. Schools must become more effective at serving the needs of the at-risk student population. The schools must ask students questions and then listen to the students' answers. The response the school makes must: address students' characteristics, fulfill students' basic needs, and respond to students' uniqueness (Compton & Baizerman, 1991). Schools must change how they operate, what they invest in, what they want to accomplish, and how they relate to children in their care (Darling-Hammond, 1990).

Chapter 2

PROBLEM EVIDENCE AND PROBABLE CAUSE

Problem Evidence: English

In order to document the extent of student under-achievement in the area of written language skills, a writing survey was administered, a subtest of the Woodcock Johnson Revised (1989, 1990) on written language skills was given to each student, and a teacher-made observation check-list was kept on each targeted student. Fifteen students in the special education English classes were involved in this process over a two-week time period.

A writing survey was developed by the researcher to assess students' feelings toward writing (Appendix A). Fifty-seven percent of the targeted students felt writing skills were in the student's possession, 7 percent of the students felt at times writing skills could be exhibited, and 36 percent of the students stated that the skills needed to be classified a writer were not possessed. Most students stated that writing skills were acquired at school. The students also listed parents and friends as contributors to the skills in writing. The students gave the following reasons for why people write: for fun, to show feelings, to

communicate with others, to learn, and for work. Many different responses were given by the students when asked what a good writer needs to do to write well. Some of these responses included: to practice penmanship, to put in details, to concentrate, to have good skills, and to have a good imagination. The students were not sure how teachers decide which pieces of writing were good ones. The answers given were: by talking to other teachers, by being able to read the piece, by good use of punctuation, and if the writing made sense. When asked how students felt about writing skills, 53 percent answered positively, 27 percent were not sure, while 20 percent did not feel skillful with writing.

An analysis of the survey revealed that approximately 50 percent of the students felt good about writing. Most of the students felt that writing skills were learned at school from the teacher, but were unclear as to how the teacher decided which pieces of writing were good.

A teacher-made observation checklist was developed by the researcher for use with the student's writing sample (Appendix B). Each student wrote on a topic of choice. A summary of the observation of the writing sample is presented in table 1.

Table 1

Teacher Observation Writing Checklist

Percent of Students Demonstrating Each Skill

Writing Area Observed	Frequently	Sometimes	Not Yet
Topic Sentence	73	0	27
Complete Sentence	40	40	20
Wide Vocabulary	0	7	93
Capitalization/Punctuation	40	47	13
Spelling	27	40	33
Grammar	7	87	6

In an analysis of the data, use of a topic sentence is a skill that 73 percent of the students have mastered. Use of complete sentences and correct capitalization/punctuation were used frequently by 40 percent of the students. Forty percent of the students sometimes used complete sentences while 20 percent were not yet able to make a complete sentence. Complete sentences needed to have one complete thought with no fragment or run-on sentences. Forty-seven percent of the students were able to use capitalization/ punctuation correctly while 13 percent were not yet able to do so.

Spelling is an area of difficulty for many learning disabled students. Twenty-seven percent of the students were frequently able to spell words in the writing sample correctly. Another 40 percent sometimes spelled the words

correctly, while 33 percent were not able to spell words in the topic chosen.

Grammar and use of a wide vocabulary were areas of concern. Grammar included use of transition words and subject/verb agreement. Only 7 percent of students were able to meet the objectives for grammar frequently, 87 percent sometimes, and 6 percent were not yet able. No students were found to be able to use a wide variety of words. Seven percent of students used a variety of words in the writing at times with 93 percent not yet able to do so.

This finding may be related to students' poor spelling ability. The words that are chosen for use in the writing may be because those are the words the student can spell.

A subtest of the Woodcock Johnson Revised on written language skills was given (Appendix C) to each targeted student. After the subtest was administered, a raw score was tabulated. The raw score was then compared to the grade equivalent score. The grade equivalent scores ranged from 13.6 to 2.0, with the average score being 6.3.

Probable Causes--English

The literature suggests several probable causes for students' poor writing. Graham (1992) was surprised to find that there was no time allocated for instruction in writing. The average amount of time students with learning disabilities spent writing during the day was 25 minutes. Most of

the time was spent on the mechanics of writing (handwriting and spelling) rather than on the content of the piece.

When instruction was given, it was inadequate (Graham, Harris, MacArthur, & Schwartz, 1991). Learning disabled students did very little meaningful planning before writing (Graham, 1992). When these students are revising writing, the concern is focused on mechanical errors rather than on the substance of the paper (Graham, Harris, MacArthur, & Schwartz, 1991). Students need to be shown how to write.

Learning disabled students do not transfer information from one situation to another. Because there is no transfer, these students are continuously taught the basic skills and are never exposed to more advanced skills (Means & Knapp, 1991). When rules and skills are taught separately from the writing process, students show smaller gains (Davis & Schloss, 1992).

There is now conclusive evidence to show that tracking of low and middle ability students is harmful. This practice lowers the students' academic achievement (Zemelman, Daniels, & Hyde, 1993). Because learning disabled students have a record of continuous academic failure, the students are less motivated.

Some probable causes for under-achievement in the area of written language skills include: inadequate time devoted to writing, inadequate instruction in how to write, and inadequate motivation by the writer.

Problem Evidence--Keyboarding I

In order to document the extent of student under-achievement in the area of keyboarding skill development, a teacher-made checklist was kept on each targeted student and teacher-made tests were administered.

A teacher-made checklist was developed to observe the basic keyboarding skills of the 23 targeted students (Appendix G). These skills were observed and recorded. A summary of the skills observed and the students' performance is presented in table 2.

Table 2

Teacher Observation Technique Checklist

Points Earned	0	1	2	3	6
Areas of Evaluation Categorized Below	Number of Students Earning These Points				
Uses correct fingering on alphabetic keys	0	0	0	23	NA*
Uses correct fingering on special keys	1	6	4	12	NA*
Correctly removes paper	0	0	0	23	NA*
Proper use of warmup time	1	3	4	15	NA*
Keeps palms up off machine frame	11	0	0	12	NA*
Keeps fingers curved while keying	1	1	3	18	NA*
Keeps finger contact with home row	3	2	2	16	NA*
Exhibits proper seating posture--feet flat on floor, head erect, eyes focused on book, back straight, body a hand span from machine, elbows close to body, and arms hanging loosely at sides	12	0	1	0	10
Makes proper use of class time	1	2	4	16	NA*
Has a good mind set and attitude	0	2	5	16	NA*
Observes end of period "cleanup routine"	0	0	3	20	NA*

*NA indicating that six points were not obtainable in these categories.

Point values were determined through teacher observation of the targeted students over a one-week period. On a specific day, the teacher would select three of the eleven checkpoints and observe and record for each student. The area describing the proper seating posture was valued at six points because of the significance of eyes being directed at the book (or copy) and the number of body positions being checked. In this category if the student was looking at the keyboard or the paper in the typewriter and at least one body posture was incorrect, the student received a zero. If the student had correct posture and eyes focused on the book (or copy), six points were given. One students received a two in this category because posture was close to perfect but eyes were observed off copy once.

In all other categories, if the student was observed doing the skill correctly, a three for that category was recorded. If the skill was observed as close to but not perfect, the student received a two, if the skill was questionably inconsistent, the student received a one, and if no skill ability was exhibited, the student received a zero. The teacher-made checklist breaks down clearly into two categories: student on-task behavior and keyboarding skill development. Analysis of the data suggest that 65 to 70 percent of the students exhibited proper use of warm-up time, on-task behavior during class time, positive mind set toward the curriculum and the teacher, and the correct

classroom clean-up procedure (Appendix H) before departing for the next class hour. This indicates a cooperative group of students willing to follow directions and attempting to accomplish the necessary steps to be successful keyboarding students.

The percentages in the skill development categories are not as favorable. Some techniques such as correct usage of fingers on alphabetic keys at 100 percent is outstanding, but the targeted students' percentage dipped to 78 percent for keeping fingers curved properly while keying text, 70 percent for keeping contact with home-row keys while striking keys off home row, and 48 percent for exhibiting proper seating posture with feet flat on the floor, head erect with eyes looking at the book or copy, back straight, the body a hand span from the machine, elbows close to the body, and arms hanging loosely at sides. These data suggest that improvement in keyboarding skills is needed in order for the targeted students to become successful keyboarding students.

Teacher-made tests were administered at the end of each week (Appendices I, J, K, and L) to further assess keyboarding skill development among the targeted students. The results of these tests are displayed in table 3.

Table 3

Knowledge Tests of Keyboarding I

Weekly Tests Given			Twenty Points Per Test Number of Students Receiving Scores			
Test Title	Median Score	Avg. Score	20/19	18/17	16/15	Lower
1. Machine Parts and Posture Essay	18	17.35	10	7	2	4
2. Calculating Margins	10	12.17	6	0	2	14
3. Calculating Words a Minute (WAM) Proofreading	16.5	15.3	6	5	6	6
4. Correct Spacing for Punctuation	12	14.09	5	3	2	12

In analyzing the data collected on the targeted students' weekly tests pertaining to keyboard setup and formatting, one at-risk area for students is the application of math calculations in the keyboarding curriculum. In order to determine the words a minute (WAM) a student types and the left and right margins to set for the document being created, math steps and calculations must be understood and utilized. On the two tests requiring math calculations, the average percentages were 61 percent and 76 percent. More closely examining the WAM and proofreading test resulted in a finding of 7% percent on the math calculation of WAM and a 63 percent class average on proofreading. This indicates that the skill of proofreading is

another area where keyboarding students are at-risk. Tests of students' ability to memorize facts in regard to the typewriter resulted in an average percentage of 87 percent as shown in test one and 70 percent as shown in test four of table 4. This disparity in percentages indicates the lack of using the ability of mental training for test four to memorize the necessary facts related to the skill of keyboarding and formatting documents appropriately. It must be noted that 22 students were tested on test four. One student who had taken tests one, two, and three moved from the school district pervious to test four.

Probable Causes--Keyboarding I

Since the advent of the computer in the elementary classroom, the quality of keyboarding skills has shown a steady decline. The earliest keyboarding instruction within this school district, previous to the 1993-94 school year, was a six-week keyboarding/introduction to computers class at the sixth/seventh grade level; but students within the district have been exposed to the computer as early as first grade. As stated in The Balance Sheet:

> Keyboarding instruction must be provided at the initial level students are required to interact with the computer. If this instruction is not available, they will be forced to develop their own--generally ineffective--keyboarding skills (Rhodes, 1989, p. 35).

A summary of the student survey (Appendix M) describing the previous experience using a keyboard is presented in table 4. Of the targeted students, 87 percent were freshmen, 4 percent were sophomores, 9 percent were juniors, and there were no seniors.

Table 4

Student Survey with Regard to Keyboarding Usage

Survey Question	Yes	No
Previously Worked on Keyboard	15	8
Keyboard in Home	18	5
School Keyboard Usage Without Formal Keyboarding Instruction	19	4
Previous Keyboarding Instruction	11	12
Any Follow Up Keyboarding Instruction	1	10
Keyboarding is Skill of Coordination	18	5

Of these targeted students, 83 percent indicated using computers in the school setting without formal keyboarding instruction. Also, 78 percent had access to a home keyboard in the form of a computer or typewriter and of those, 65 percent stated that the keyboard had been used for doing work. Forty-eight percent did have some keyboarding instruction but indicated this occurred after the introductory usage of the keyboard. The length of instruction was nine weeks or shorter for 56 percent of the students. One student's instruction lasted one semester (18 weeks), and one was enrolled for a full school year, but that

student failed the course. Thirty percent of the keyboard instruction took place at the seventh-grade level, 13 percent at the eighth-grade, and 6 percent as a freshman in high school.

Another area that puts the keyboarding student at-risk is the misconception that the skill of keyboarding is directly related to coordination rather than the mental discipline of knowing the location of the keys and the nonkeyboarding material such as punctuation usage. Of the 23 targeted students, 78 percent believed keyboarding was a function of innate coordination and this determines the students' success at the keyboard. A further analysis of the student keyboarding survey indicated that 35 percent took keyboarding as an elective because of the computer world that exists, another 35 percent had no specific reason for taking it, 23 percent took the course as a recommendation from a parent, guardian, or school counselor, and one student, or 4 percent, was born with webbed fingers resulting in surgery and wanted keyboarding to help improve the use of these hands.

Effective in September, 1994, formal keyboarding instruction was introduced to the students of this district at the fifth grade level. The assigned teacher had no training in keyboarding instruction but was chosen because of being the fifth grade language arts teacher and because of showing an interest in presenting the curriculum

(G. Berry, personal communication, August 28, 1995). The students are instructed using a computer laboratory and utilize the learned keyboarding skills within the language arts curriculum. Once again the literature states that keyboarding skills should be taught at the earliest level that students are exposed to computers in any educational experience (Klopping, 1993). The students are still developing ineffective skills four years ahead of formal keyboarding instruction.

Another important issue that has affected the performance of keyboarding students at the secondary level is the fact that business educators have not participated in the implementation of keyboarding instruction at the elementary level. Since the elementary teachers have not been trained in the instructional methods of keyboarding skill development, the best methods of delivery may not have been utilized (Sormunen, 1991).

Keyboarding teachers need to stress to students that using mental training to learn the keyboard is of utmost importance in the development of keyboarding skills. As communicated by Condon and LaBarre in Lewis (1991),

> One keyboards...with the brain. The point of practice should seldom be to increase manual dexterity. The students are likely to begin keyboarding...with all the manual dexterity they will ever possess. The object of instruction is to teach the keystrokes...to the brain

and foster the rapidity with which the brain can send those knowledges to the hand. (p. 23)

The literature suggests several underlying causes for academic under-achievement in the area of keyboarding skills. In the process of keyboarding development, the students must recognize the necessary non-keyboarding skills needed to be academically successful. So often, students neglect these non-keyboarding activities and concentrate only on the act of keyboarding. Students will ignore proofreading the assigned tasks or do an inadequate job of proofreading. The students are more concerned with the speed necessary to complete the task rather than the quality of the work. The students fail to designate time for reading of instructions, for editing of copy, for correct formatting, and for proofreading the work before submitting it for assessment (King, 1990).

A possible cause of these poor proofreading skills is that proofreading is talked about very often by the teacher, but the skill is not taught to the students. "In fact, most of us teachers have not been taught specific proofreading skills" (Madraso, 1993, p. 32).

Practices that are taking place in some curriculums are undermining the importance of keyboarding instruction. Research details how students use computer tutorials for basic keyboarding lessons. The students utilize these programs approximately three times weekly for ten-minute

intervals (MacArthur, Schwartz, & Graham, 1991). This is not adequate time to produce a skill at the keyboard. As a result of this form of learning, ineffective keyboarding skills are implemented.

The advent of new technology has been cited as another possible cause in the decline in academic achievement of the keyboarding students' accuracy when being tested on straight-copy timed writings. This assumption "may be explained by the weak and strong finger theory" (Joyner, Arnold, & Schmidt, 1993, p. 16). The literature suggests that the extremely sensitive touch found on many of today's keyboards allows the keyboardist to easily key incorrect characters.

> As technology becomes an increasingly pervasive part of our lives, the skills for using that technology become progressively more important. Keyboarding, a prime example, is more essential than ever before because of the widespread use of computers in our society (Hanson, 1991, p. 2).

Some probable causes for under-achievement in the area of keyboarding consists of: early usage of computers with no touch approach and no skill/technique instruction, lack of mental training needed to learn the keyboard and factual keyboarding data, lack of implementation of non-keyboarding skills, and lack of proofreading skills.

Chapter 3

THE SOLUTION STRATEGY

Review of the Literature

In the process of reviewing the literature, many different suggestions for solving the problem were acquired and studied. The following summarizes the major points covered by the professional literature.

According to Atwell (1987) the Writer's Workshop is one way to improve writing skills for at-risk students. The students take responsibility for choosing topics to write about, accept rejponsibility for self-assessment of written work, evaluate each others' work through the process of peer conferencing, and revise the work where deemed necessary.

The teacher, as facilitator of the workshop, helps students expand on ideas and monitors daily progress. Through mini-lessons the teacher will show students aspects of writing tasks that need improvement relative to the students' current task(s).

Student ownership in this process is most important. Students must be involved in the decision making from beginning to end to insure students take responsibility for learning (Au, Scheu, Kawakami, & Herman, 1990).

Graves (1983) states that the best way to teach writing is to simply let students write. According to Graham (1992), in order to make writing meaningful three things must be considered: The students' writing is most effective when directed toward an authentic audience, the student authors have tasks that are both interesting and important, and a real purpose is addressed in the writing task.

Another suggested solution for the problem is cooperative learning. According to Davidson and Kroll (1991) cooperative learning is learning that takes place in an environment where students in small groups share ideas and work collaboratively to complete academic tasks. In academic areas, cooperative work can be used in practicing skills, in discovery learning, in laboratory investigation and data collection, in group discussion of concepts, and in problem solving. It can also be combined with computer instruction, peer tutoring, brainstorming, reviewing, and group testing.

According to Slavin's study (cited in Davidson and Kroll, 1991) student achievement is increased by cooperative methods that use group rewards and individual accountability. A cooperative learning group works to produce a product or achieve some other goal. These groups are very helpful and supportive to the students because discussion and application of the content that the teacher previously presented to the class can occur (Chapman, Leonard, &

Thomas, 1992). These groups also have many benefits, both cognitive and affective. As stated in Davidson and Kroll (1991):

> Among benefits that have been the subject of investigation are increased knowledge or skills, increased conceptual understanding, improved attitudes or motivation, improved communication skills, and improved social skills. (p. 363)

Johnson and Johnson (1993) state some of the problems teachers must address in the process of developing cooperative learning settings. Gifted students do not always engage in cooperative learning with an agreeable attitude. There are situations where the teacher places learners in a cooperative environment but the students do not do cooperative learning. This method of student learning is not intended to be a seating arrangement but an interactive learning exchange. It is to be void of competition and structured to develop the interdependence of the group to promote achievement of all group participants. Social skills must be formally taught to the students involved in cooperative learning in order for the development of interpersonal skills necessary for success.

Cooperative learning has been a successful approach to untracking schools and improving the academic achievement of the "low" and "average" students while "high-achieving students" progress is undiminished and sometimes improved.

Schools who have implemented cooperative learning and eliminated tracking have noted improvements in discipline, school climate, and teacher morale (Drake & Mucci, 1993).

Cooperative learning is an alternative to the traditional approach of tracking students in ability groups. Research has indicated that the traditional approaches:

> Underestimate what students are capable of doing; postpone more challenging and interesting work for too long--in some cases, forever; and deprive students of meaningful or motivating context for learning or for employing the skills that are taught (Means & Knapp, 1991 p. 282).

Literature states that through the use of the portfolio educators can encourage students to be self-directed learners (Paulson, Paulson, & Meyer, 1991). A portfolio contains several separate pieces that may not be significant standing alone, but when put together, these pieces produce a more realistic picture of the student (Burke, 1994). A portfolio is a tool that an educator can implement to motivate students to take responsibility for learning. The use of this learning tool develops ownership and becomes the basis for pride in students' accomplishments.

Research has shown that the students must participate in the selection process for the portfolio. The focal point should be placed on process of growth rather than content. Portfolios can be established for a designated period of

time or can be a cumulative collection of work. The students conference with the teacher about works in progress, additions, and deletions to this portfolio (Hebert, 1992).

Portfolios provide an opportunity to improve students' self-image by showing accomplishments rather than deficiencies. An important component of a portfolio is student self-reflection. Criteria for evaluation are established by the students and teacher. Based on these criteria, choices of work are placed in the portfolio. According to Paulson, Paulson, and Myer (1991) "Portfolios can become a window into the students' heads, a means for both staff and students to understand the educational process at the level of the individual learner" (p. 62).

Literature on the theory of multiple intelligences suggests that humans have been observed possessing more than one mode of learning. Learners' strengths vary and this can be governed by the context of the work. When individual strengths are distinguished, these can be beneficial in the learning process (White, Blythe, & Gardner, 1991).

Howard Gardner and his colleagues developed the theory of multiple intelligences. In White, Blythe, and Gardner's (1992) research, seven areas for human achievement have been identified as stated in Burke, (1994):

Linguistic intelligence involves ease in producing language (writers, poets, storytellers). Logical-

mathematical intelligence involves the ability to reason and to recognize abstract patterns (scientists, mathematicians). Musical intelligence includes sensitivity to pitch and rhythm (composers, instrumentalists). Spatial intelligence is the ability to create visual-spatial representations of the world and to transfer those representations either mentally or concretely (architects, sculptors, engineers). Bodily/Kinesthetic intelligence involves using the body to solve problems, to create products, and to convey ideas and emotions (athletes, surgeons, dancers). Interpersonal intelligence is the ability to understand other people and to work effectively with them (salespeople, teachers, politicians). Intrapersonal intelligence is personal knowledge about one's own emotions or self. (p. 73-74)

Teachers' learning style preference is frequently how teaching and assessment take place. Those students who possess a learner style most matched to the teacher will be most successful. Therefore, teachers must erase this disadvantage felt by many students. Students are often labeled with lack of ability when the problem is lack of addressing the multitude of learning styles teachers encounter daily. It is important that teachers expand methods of teaching and assessing to accommodate all learners. If teachers make

these necessary accommodations, student performance will show marked increase (Sternberg, 1994).

The key to teaching is to vary the approach teachers use in addressing the assortment of thinking and learning styles encountered in the classroom. When this takes place, academic achievement will improve. Gardner (1987) states:

> ...not all people have the same interests and abilities; not all of us learn in the same way and we now have the tools to begin to address these individual differences in school. (p. 190)

Motivation is one factor that has been studied concerning student under-achievement. The students who have a pattern for failure use the following four reasons most frequently:

1. Not having the ability.
2. Not expending enough effort.
3. Task difficulty.
4. Luck. (Alderman, (1990).

At-risk students have the feeling of no control over academic success or failure. These students expect to do poorly. As stated by Covington and Beery (1976) in the article written by Alderman (1990): "Low achieving students in particular need to know exactly what they are expected to do and the criterion for measuring their success." (p. 33)

The first step in increasing motivation is goal setting. Goals should be specific rather than general.

harder rather than easier (but attainable) and close at hand rather than distant. Teachers and students should jointly decide on goals to pursue.

Next, learning strategies are identified that will help accomplish goals. Students then measure success based on the goal that was established. Lastly, students will attribute success to personal effort or abilities. The teacher's role is to help the student make the appropriate link. If students feel that success/failure (by using appropriate strategies) is within student's power, these at-risk students will become more motivated.

Eighty years of research on childrens' learning patterns has determined that schools should be designed to accommodate the differences in children. One way this can happen is by implementing an interdisciplinary curriculum.

When a number of different subjects are woven together in a project outcome, it simulates a real-life activity. Separate subject skills taught to students need to be pulled together in a culminating project that the students can hook to real-life activities. Students need the opportunity to explore, and projects can give this opportunity to the students.

Interdisciplinary projects teach students to work with others, encourage creative thinking, encourage responsibility, and provide for the opportunity to share ideas with other classmates (Everett, 1992).

When students are permitted to investigate areas of interest, the motivation level increases. Planning the interdisciplinary projects should involve the students through a class meeting. Students are given the opportunity to question, submit ideas, and be a part of the decision-making process. The teacher takes the role of facilitator and observes learning and offers suggestions when needed. Students are active learners through this process and become more responsible for the process of learning.

The interdisciplinary learning method has been called the "developmental/interaction approach" (Everett, 1992 p. 59). In this approach, the child is able to interact during stages of growth. With this style of classroom structure, learning is more attuned to the students' learning style.

Research has shown that when a school has a climate that is supportive, it is helpful for the at-risk population. Within the classroom, the teacher is the key to establishing such a safe and comfortable environment. At-risk students should not be assigned to at-risk teachers. "Only teachers who have both the will and ability to create positive, supportive, intellectually challenging classroom environments should be afforded the opportunity to work with these students" (Pigford, 1992, p. 156). It is important, that when working with at-risk students, teachers acknowledge the need for positive teacher/student interaction.

Teachers must hold high expectations for at-risk students and make them accountable for both behavior and academic achievement.

It is of utmost importance that each at-risk student receive personal recognition by the staff. Too often at-risk students have not received personal recognition; but, through a healthy school environment, these students can feel connected to adults in a trusting relationship.

Employing staff development techniques to address the at-risk population will help the students feel important, unique and visible (Pigford, 1992). The classroom teacher is where the answer is found. These teachers need to be competent, compassionate, sympathetic, and academically challenging. Through staff development programs, the school can help with the academic achievement of the at-risk population.

Peer mentoring is another solution strategy for improving the academic achievement of the at-risk student. For at-risk students, the feeling that someone depends on that student is clearly very important. Humans have a natural desire to want to be needed and important. Unfortunately, students with poor academic achievement develop the feelings of low self-esteem, worthlessness, and inadequacy. The at-risk student faces many failures. Schools should try to counteract this feeling of inadequacy with special programs to lift self-esteem. One approach

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that has been implemented is a peer mentoring program where an altruistic quality is developed in these at-risk students. It is important to help these students develop self-pride and this happens when society can make the student feel useful. "Helping others is therapeutic" (Curwin, 1993, p. 36).

An important feature of this solution for at-risk students is to eliminate the external reward and aim for the students to focus on the internal benefits. This program should be made optional for the students, and the teachers should not place pressure on the students' involvement. An example of a helping opportunity would be tutoring a younger student. This program needs to be monitored by adults so a positive experience for both the at-risk students and the mentored students can develop. When genuine opportunities for assistance are directed towards at-risk students, "no longer do the labels 'bad,' 'slow,' or 'at-risk' apply" (Curwin, 1993, p. 39). This positive experience can change the attitudes of the students labeled at-risk and those who work and teach these students. These positive experiences and attitudes can also lead to change and success in the students' academic achievement.

Increasing the involvement of parents of at-risk students is accomplished through improving communication between home and school (Vandegrift & Greene, 1993). By

improving communication, parents are more likely to be supportive of the children and of education.

In a pilot project in Arizona, many wonderful events were offered to increase parental involvement, but families didn't come. Through interviews with these parents it was found that what the parents really wanted was to learn English (most spoke only Spanish). The school revamped the program to offer English as a second language. Parents got excited about reading with the children.

> The success of any parent involvement strategy depends on how well it matches an individual parent's needs. The secret is to know who your parents are and to have in a school's repertoire as many options for involvement as possible. This ensures an appropriate match between a parent's level of commitment and willingness and ability to be involved (Vandegrift & Greene, 1993, p. 21).

Another program for at-risk teens allows parents to meet in support groups. This enables parents to meet with others who are dealing with the same problems.

When a student breaks a rule that should result in an out-of-school suspension or an expulsion, the school offers the student and parent an alternative: to attend a number of meetings equal to the number of days the student would be suspended (Roberts, 1993). At least one parent must agree to attend the meetings with the student. In the meetings,

parents learn how to set limits and gain support. Teens learn personal accountability.

These programs are examples of the changes that are occurring to increase parental involvement--involvement that is necessary for students' success in school.

The incorporation of study skill activities has been effective with at-risk learners. Decker, Spector, & Shaw, (1992) state that study skills should be taught within the regular classroom content material rather than as a separate course.

A list of weekly or unit assignments can be posted on the board or written out to facilitate students' learning and to help them learn how to manage time. A daily check on student preparedness for class can be helpful. Also, a specific time to look at notebook organization can help. These can be checked quickly and counted as one or two quiz grades at the end of the quarter. Notetaking and outlining skills can be fostered through the use of clustering, mind-maps, and concept trees.

Students memory can be enhanced through the use of flashcards, color cuing, and mnemonics. Flashcards can be used with new vocabulary terms. Different concepts can be highlighted in different colors to set these ideas apart. The use of mnemonics can help students memorize a diagram, map, or list. Different methods of delivery should be implemented so all learning styles are taken into consider-

ation. As students self-assess what is known and how to study, students become more realistic about how to be successful.

Active learning can be accomplished through the use of manipulatives. According to Scheer (1985) manipulatives can be used so that students can see what is trying to be explained abstractly. Recall the old Chinese proverb:

I hear and I forget;
I see and I remember;
I do and I understand.

Research shows the use of manipulative materials helps students, from the elementary levels to the advanced levels of high school, understand academic concepts (Coes, 1993).

Manipulatives are used in the context of transfer of learning. According to Bohan and Shawaker (1994) if transfer is to occur, the students must progress through several stages. The stages are called "concrete," "bridging," and "symbolic." The concrete stage is the use of manipulatives only. The bridging stage uses manipulatives and symbols simultaneously. Symbols alone are used in the symbolic stage. As stated in Bohan and Shawaker (1994):

> A lot more is involved in using manipulatives than merely having students push objects around (Cohen 1991). Unless we help students make that critical connection between conceptual work done with manipulatives and the procedural knowledge it is designed to

promote, manipulatives may be mere tag-ons to the mathematics curriculum rather than what they can be--an essential, enlightening, component of the mathematics experience of our students. (p. 34-35)

The philosophy of the Constructivist theory has been proven to be successful with at-risk students. As mentioned in Aikenhead (1992):

> Constructivism assumes that meaningful learning takes place when students construct their own meaning of an event. This can occur in a number of ways; by active participation, by reflection, and by practice at transferring a scientific idea to an everyday context. Through participation, reflection, and practice, students can incorporate new ideas into their previous knowledge, or perhaps even replace their previously held, common-sense conceptions with more precise scientific conceptions. (p. 32)

Traditional instruction transmits academic facts, skills, and concepts to students as passive learners. Active learner involvement is stressed in constructivism. According to Clements and Battista (1990), the basic tenets of constructivists are as follows:

1. Students' knowledge is actively created or invented.
2. Students' ideas are constructed by reflecting on prior physical and mental actions.

3. Interpretations of the world are shaped by experiences. No one true reality exists.
4. Children grow socially by learning the intellectual life of those in the surrounding environment.
5. If set methods or values are placed on the student, there is serious curtailment of students' sense-making activity.

The interventions chosen: The use of a Writer's Workshop and the use of Portfolio Assessment, will aid in creating a constructivist classroom. According to Brooks and Brooks (1993): teachers cannot accept sole responsibility for students' learning. An educational environment should be created where the students personally assume responsibility for learning. To provide such an environment, teachers must encourage self-initiated inquiry, provide appropriate materials for the learning tasks, and facilitate teacher/student and student/student interactions.

Project Outcomes and Solution Components--English

As a result of a Writers' Workshop program during the period of September 1995 through January 1996, the targeted English students will increase writing ability as measured by writing samples and standardized test scores.

In order to accomplish the terminal objective for English, the following processes are necessary:

1. Learning centers will be established.
2. Peer and student-teacher conferencing will be employed.
3. Portfolio assessment will be implemented.

Action Plan for the Intervention--English

1. Learning centers established.
   A. Arrange classroom.
      i. Individual work area - Students work on current piece of writing.
      ii. Group work area - Students may peer or teacher conference here.
      iii. Supply table - Supplies necessary for writing are placed here, such as construction paper, scissors, pens, pencils, white-out and stapler.
      iv. Reading materials area - Different types of reading materials will be placed here such as, books of different readability levels, newspapers and magazines.
      v. Bulletin board area - Make space available to display current pieces of students' written work.

B. Class routine.

i. Status of the class (5-8 minutes).

This consists of a weekly assignment sheet (Appendix D) for each individual student. Sheets are the work day plan that verifies for the teacher what the student has been doing all week and makes a student accountable for the time in class. Sheets must be filled out at the end of each class period. The assignment sheet will be reviewed and collected by the teacher each week.

ii. Mini-lesson (5-8 minutes).

The mini-lesson is time in class that, in the beginning, is used to discuss different areas in the room and what the students are to be doing in each area. For example, the individual work area is a quiet area where students can go to work undisturbed on a current piece of writing. As students' written work is assessed, the teacher may use this time to teach a particular skill that is seen to be missing in the students' writing. The mini-lesson does not happen everyday, but on an as-needed basis.

iii. Writing time (20-30 minutes).

During this time, students will work on the current piece of writing. The topic may be assigned to the class as a whole by the teacher or may be left up to the student to choose individually. Individual topics may come from a list of topics the students have compiled or from a current book or article the student has read.

iv. Group sharing (10-15 minutes).

Students share the work produced that day. If the student has produced individual work, then sharing is decided by the student. Students may choose to share or not, but each must do so at least once a week. Sharing can be kept track of on weekly assignment sheets. On topics assigned by the teacher, an all-class discussion will take place where students can discuss ideas and points of view.

C. Set up library time.

Once a week.

D. Set up field trips and speakers.

Field trips will be set up to places such as a newspaper. Speakers, who write as a career, will be invited to the classroom to discuss how writing

is accomplished. This will help the students see how the process of writing is accomplished.

2. Peer and student-teacher conferencing implemented.

Rules for peer conferencing will be established through the Revising Strategy form (Appendix E). Peer conferencing will take place when a student has finished the first draft on the current piece of individual writing. Student-teacher conferencing will take place once a week and will work from the student's weekly assignment sheet. Pieces of writing will be looked at, discussed and teacher assistance will be given on skill areas found to be lacking.

3. Portfolio assessment established.

A. Work in progress.

This portfolio will contain all pieces of the student's writing. There is no criteria for this, only that it must have been written by the student.

B. Finished work.

This portfolio will be separate from the work-in-progress. A completely finished piece that has gone through a peer and teacher conference will be put in this folder. It may be hand written or typed and should be one the student considers to be best work. A rubric (Appendix F) assessing the written piece will be completed together in a student-teacher conference at twelve-week intervals three times per school year.

Methods of Assessment--English

In order to assess the effects of the intervention in English, writing samples will be evaluated through standardized test scores, student-teacher conferencing, and portfolios.

Project Outcomes and Solution Components--keyboarding

> As a result of the implementation of portfolio assessment during September 1995 through January 1996, the targeted keyboarding students will show skill improvement as measured by technique observation checklists, timed writing assessments, keyboarding jobs, and the finished portfolio.

In order to accomplish the terminal objective for keyboarding, the following processes are necessary:

1. Establish with students a work-in-process folder and a portfolio folder for use in self/teacher assessment.
2. Design standards or rubrics for work.
3. Inform the parents of the targeted students of the class rules and expectations by having a parent/guardian sign the bottom of the student's copy and return it to the teacher.
4. Establish conference schedule with students.

Action Plan for the Intervention--Keyboarding I

WEEK 1--August 28-September 1

Monday--20 minute class period

1. Students complete survey (Appendix M) on previous keyboarding knowledge and experience.
2. Students are given class rules and expectations form (Appendix N) to be read, signed, and coupon returned by student from parent/guardian.

Tuesday

1. Portfolio creation.
   A. Explain to the targeted keyboarding students what a work-in-process portfolio and a finished portfolio are and how the portfolio will be used in the assessment process.
   B. Model for the students a facsimile portfolio created by the teacher.
2. As students begin the use of the keyboard in Lesson 1, have all work in process during the week placed in the work-in-process folder.

Wednesday

1. Finish up or review Lesson 1.
2. Lesson 2 introduction of new keyboarding letters.
3. Review orally parts of the typewriter and keyboard.

Thursday

1. Completion of Lesson 2.
2. Introduce Lesson 3.
3. Review keyboarding techniques.

Friday

1. Quiz/test covering learned keyboarding information covering lessons 1-3--parts of machine (Appendix I).
2. Completion and review of Lesson 3.
3. On the last day of the week have the students self-assess the work accumulated in the work-in-process portfolio--lessons 1 through 3.
   A. The students will place the two best selections with a paper clip in the teacher's in-basket.
   B. All other completed daily work will be stapled and placed behind the student's selections.
   C. After the teacher has examined and recorded the students' work, the student can remove the work not selected for the finished portfolio.
   D. Those pieces chosen will be retained in the finished portfolio for growth comparison and the end-of-year finished portfolio to accompany the student to the next level of a business application class.

WEEK 2--September 5-8

Monday--Legal Holiday--school not in session

Tuesday

1. Introduce Lesson 4.
2. Timed writing explanation and practice.
   A. Students will take the first one-minute timing of the school year.

i. The teacher will instruct the students on calculating speed.

ii. The student places this timing in the right pocket of the finished portfolio.

B. The teacher will explain the purpose of charting and goal setting in regard to improving skill in timed-writing assessment.

3. When students take weekly timed writings, the students will chart timed writing progress on teacher-made chart (Appendix O).

Wednesday

1. Explain and give a copy of the technique sheet the teacher will be using for assessing the students' techniques beginning in Lesson 6 (Appendix G).

2. Introduce the new key strokes in Lesson 5.

3. Explain to students in detail what constitutes an error.

Thursday

1. Lesson 6--Clinic--Practice Lesson

A. The teacher will record on the first Technique Observation Checklist (Appendix G), and the students in the targeted class will be given a copy of individual performance to review and place in student's finished portfolio (Appendix P).

B. At every six-lesson interval there is a clinic lesson. On these days the teacher will observe

students' techniques and record the students' progress on the checklist.

2. Students will monitor the progress of the Observation Checklist.

Friday

1. Quiz will be taken on calculating the margins for formatting material (Appendix J).
2. Any student not passing the calculation of margins will retest until the test is passed.
3. Introduce new keystrokes in Lesson 7.
4. Self-assess work accumulated in work-in process portfolio folder. Select two best pieces and paper clip on top of all weekly work. Submit to teacher.
5. As in Week 1, this procedure will take place each Friday.

WEEK 3--September 11-15

Monday

1. The students are given the first semester rubric for timed writings (Appendix Q).
   A. This rubric is placed in the students' finished portfolios for growth charting.
   B. The students' self-assessed weekly work is returned and students place selection(s) in finished portfolio.
2. Completion of Lesson 7 and introduce Lesson 8.

Tuesday

1. If Lesson 8 has been completed, begin Lesson 9 introducing new keystrokes and reviewing technique checkpoint.
2. Practice one-minute timed writings. These will be placed in work-in-process portfolio folder.

Wednesday

1. Completion of any unfinished Lesson 9 and introduction of Lesson 10.
2. Practice timed writing.

Thursday

1. Completion of Lesson 10; introduce Lesson 11.
2. Instruct students on correct spacing procedures when using punctuation.

Friday

1. Lesson 12--Clinic--Technique Observation Checklist will be implemented by the teacher.
2. Students will self-assess work in work-in-process portfolio folder covering lessons 7-11 and submit work to teacher for assessment.
3. Quiz covering the calculation of words a minute and circling uncorrected errors on timed writings (Appendix K).
4. Any student not passing the quiz on WAM will re-test until the test is passed.

WEEK 4--September 18-22--QUARTER 1--MID-TERM WEEK

Monday

1. Student/teacher typewriter technique conferencing will begin today. Goals sheets will be completed by the students and the teacher (Appendix R).
2. Completion of Lesson 12 if necessary.
3. Introduce Lesson 13.
   A. First teacher-scored timed writing is placed in students' finished portfolios.
   B. This is the students' baseline timed writing to use for comparison on timed-writing progress.

Tuesday

1. Introduce Lesson 14. Formatting for horizontal centering is presented.
   A. Students will place first centering job in work-in-process portfolio folder for future self assessment.
   B. After completion of numerous horizontal centering jobs, students select best work for teacher assessment using job rubric (Appendix S).
   C. After student receives assessed work from teacher, the student will place selections in left-side pocket of finished portfolio.

Wednesday

1. Introduction of Lesson 15. Students' first two-minute timed writing.

A. Students compare the speed and accuracy to the one-minute timing and rubric in student's finished portfolio.

B. After the teacher has recorded the timing, the student places the timing in the right pocket of the finished portfolio.

2. Students have four centering jobs to accomplish.

A. These jobs are placed in work-in-progress portfolio until complete.

B. The students then select the one that best represents the centering technique.

C. Selection is paper clipped to other three and place all work in teacher in-basket for the teacher to check students' progress.

3. Students receive the work back.

A. Selection will be placed in the students' finished portfolio.

B. Students will be encouraged to take the other three home.

Thursday

1. Lesson 16--students will be taught the format for vertical centering.

A. Students will be assigned two vertical centering jobs to complete.

B. Extra practice material will be made available at completion of this work.

2. The teacher will continue conferencing with the students.

   A. Using the technique checklist, the teacher and student will discuss the progress to date.

   B. Both teacher and student will record goals the student will try to attain by the next conference which is at the eighth week.

3. Teacher/student conferences must be completed.

Friday

1. Quiz on proper spacing related to usage of punctuation at the keyboard (Appendix L).
2. Students will be granted time to finished any incomplete work.
3. Practice exercises will be available for student use.

CYCLE

The above cycle will take place at every four-week interval in order for both the teacher and student to assess the work completed and to establish goals for the next four-week cycle.

Method of Assessment--Keyboarding I

Based on the action plan developed for these targeted keyboarding students, the following assessment criteria will be implemented: keyboarding technique observation check-list, timed writings, daily keyboarding jobs, proofreading skills, and student-created portfolio.

Chapter 4

PROJECT RESULTS

Historical Description of Intervention--English

The objective of this project was to increase the writing ability of at-risk students. The implementation of portfolio assessment, the employment of peer and student-teacher conferencing, and the establishment of learning centers were selected to affect the desired changes.

Learning centers were established before the first day of school. The room was arranged so the following areas were clearly defined: supplies and materials, student-teacher conferencing, writing, and displayed (finished) writing. When school began, students were informed of these areas and what to do in each one through the use of mini-lessons during the first week of school.

The class routine followed a true writers' workshop at the beginning of the intervention. The class began with a five- to eight-minute period called status of the class. During this time, each student reported to the teacher what would be worked on that day.

Next came the mini-lesson. This was to be about five to eight minutes long, but usually ended up taking longer.

The mini-lesson averaged fifteen minutes in length. Many things were accomplished during mini-lessons. As previously stated, instruction was given in how to use each area of the classroom, how forms like the assessing rubric would be used, how to peer conference, and how to revise and improve different pieces of writing.

After the mini-lesson came the writing time. This was twenty to thirty minutes in length. Students were responsible for writing on the piece chosen during status of the class. If problems were encountered with their writing, the teacher was available for assistance. On the first day of class, students were assigned to brainstorm as many topics as possible to use for writing. This list was stapled in their work-in-progress portfolio to be available when a new topic to write on was needed.

The last ten to fifteen minutes of the class was available for group sharing. Students could choose to share their writing with the class. If there was a problem or question that students needed assistance with, it could be addressed then also in a large group setting. This was the time that was shorted the most often. Two factors were thought to influence this observation:

1. This was the last part in workshop. If the other parts took longer, then naturally this part would be shortened.

2. Students were reluctant to share their writing with other students, so no demand was made to include this part.

The library was utilized once a week during the intervention. Students were then able to research any topic needed.

During the fourth week of school, the implementor began to notice that modifications needed to be made in the action plan. The status of the class was becoming a talk time unless that was the particular student who was being addressed by the teacher. In order to correct the problem, the implementor chose to use a status of the class form. This provided the written documentation of what the student was accomplishing all week and alleviated the talk time problem at the beginning of class. Now the students came into class, got their work-in-progress folders, wrote down what was to be accomplished that day and began. At the end of each week, the teacher and student would sit down and review the status-of-the-class form and work accomplished. The modification also had an added benefit of keeping the student and teacher informed of missed work because of absences.

Another area of concern was the writing time. Students had exhausted the topic list. Much time was spent talking with other students or reading the newspaper. The implementor made the decision to begin assigning writing topics

from writing magazines, controversial topics like dress codes for schools and from the reading of newspapers, magazines, and in class novels. Students were content with this decision and did not complain. Group sharing became more involved after this time because the discussion centered on one topic.

Peer conferencing was discussed during the first week of school. During the third week of school, each student chose one paper and had a peer edit the paper.

The implementor decided that a formal student-teacher conference would take place once during the intervention. At the end of twelve weeks, each student chose one written piece from the work-in-progress folder. This piece went through a peer-conference, student revision, and was then typed. A individual student-teacher conference was held. A conferencing form was used to evaluate what writing skills the student possessed and what skills needed to be worked on.

Two portfolios were established for each student. A work-in-progress folder was used for any piece of writing the student did. The finished work folder contained only the written pieces a student had taken through a peer- and student-teacher conference. Most were typed. These pieces were considered the student's best work were used to show the student's progress in writing.

Presentation and Analysis of Results--English

In order to assess the intervention strategies used to motivate at-risk students, writing samples were evaluated through standardized test scores, student-teacher conferencing and portfolios.

Table 5

Woodcock Johnson Revised Standardized Test

Writing Sample Subtest

Student I. D.	Pretest	Postest	+/- Months
1	5.9	10.0	+37
2	7.0	10.0	+27
3	3.9	4.4	+5
4	7.0	5.6	-13
5	7.6	11.7	+37
6	6.3	11.7	+49
7	3.3	Dropped out	X
8	11.7	16.9	+47
9	4.4	13.6	+83
10	13.6	16.9	+30
11	2.4	3.0	+6
12	6.6	5.6	-9
13	5.6	7.0	+13
14	2.0	2.8	+8
15	7.6	11.7	+37
Average	6.3	9.4	+35.5

In comparing the pre- and post-test results of the intervention on the writing samples, the scores showed an

increase for all students but two. One student was not listed in the results because of dropping out of school. On the pre-intervention test, the highest grade equivalent score was 13.6, the lowest 2.0 with an average score of 6.3. On the post-intervention test, the highest grade equivalent score was 16.9, the lowest 2.8 with an average score of 9.4. The lower level students showed less of a gain than other students.

Eighty-four percent of the students showed a gain in the writing sample. Twenty-eight percent gained 0-18 months growth, 14 percent gained 19-36 months growth, and 42 percent gained over 37 months growth. The average months gained in writing samples during the intervention was 25.5 months growth.

The students' finished pieces from the portfolios were evaluated during student-teacher conferences. Discussion between student and teacher began with why the student had chosen that particular piece of writing to use as a finished piece. Answers varied from, "It was an important part of my life this summer" to "It was the longest thing I wrote." Next the student was asked which areas of writing they did well on and which areas needed improvement. Answers were recorded and the implementor added to each. The rubric was then used to score each paper.

Figure 1 compares the results of the pre-intervention observation checklist to the rubric used in post-intervention

conferencing. All areas showed improvement. More students were successful in the following areas: the number of students able to write topic sentences increased by 13 percent, the number of students using complete sentences improved by 46 percent, the number of students with a wider vocabulary went from 0 to 21 percent, the number of students using capitalization and punctuation correctly increased 17 percent, and the number of students showing correct spelling had the smallest gain with only a 2 percent increase from pre- to post-intervention.

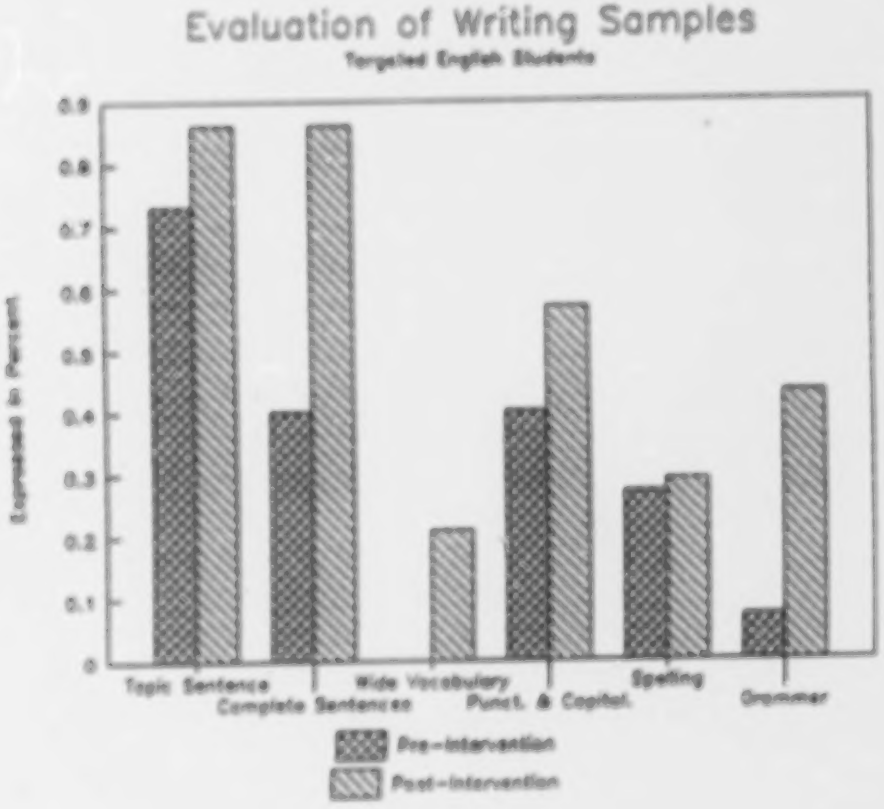

Figure 1

As previous stated in chapter 2, spelling is an area of difficulty for many learning disabled students. This may be the reason that spelling showed the smallest gain.

At the beginning of the intervention, students were very hesitant about writing. Many experienced what is known as "writer's block" or just did not know what to write about. This is where the topic sheet that had been produced by the student on the first day of school was used to stimulate their writing. More than anything, the implementor felt the students were just not comfortable expressing their ideas on paper. Many years of built-up frustration and anxiety at having their papers returned all marked up had stifled the student's ability to write. They were not willing to risk writing.

Through much coaxing and then praise by the implementor, students began to take risks and write. During conferencing, the positive parts of the paper were looked at first and only one or two of the negatives were discussed. Students had input during the evaluation process and discussion could take place with the teacher about how to improve in an area of writing that the student was having trouble in.

By the end of the intervention, students were much more willing to share their thoughts and ideas on the topics they had written about. The students wrote more freely and had less trouble with "writer's block."

The intervention was a success. The overall result of the strategies used resulted is an increase in student's writing ability demonstrated by an increase in test scores and observable behavior.

Conclusions and Recommendations--English

Clearly the intervention had a positive effect on students' writing ability, which would in turn improve their academic achievement. The skills necessary to become a better writer improved through the use of a writer's workshop. Mini-lessons to correctly teach problem areas for students transferred into their daily writing. The peer- and student-teacher conferencing allowed the student to revisit and revise the writing several times. This was felt to improve the quality of the paper. Portfolios kept all assignments together in one location for the student. This also allowed the student the opportunity to see where mistakes had been made in the past and how their writing had improved or grown over a sixteen week time period. During the intervention, some problems became apparent and changes were made.

The students did not respond well to choosing their own topics. Even though we had made a topic list before writing began the students seemed to not be able to focus on the goal. It may have been because of the fear of failure or they had never been allowed to chose their own topic or a combination of the two. To remedy this problem in the future, I would start with specific topics in the beginning

then gradually to more general topics. I think this would cause less of a dramatic shift for the student.

Changing from a verbal to written format for status of the class worked better. It took less class time and the students were ready for the mini-lesson at the beginning of class. The added benefits were a written log of what each student had done for my records and more time for group sharing. Another possibly that was proposed but never tried was to use a journal stem at the beginning of class. Then the status of the class could be kept in a verbal format. Lastly, I would recommended that the implementor set a specific number of papers to be taken to final form in a nine-week time period. I did not choose to do that because I was unsure how many would be an appropriate number and did not want the students to feel pressured into accomplishing more than they could handle. I now feel this would have kept everyone more focused.

Writing daily for a purpose instead of the drill and practice sheets students were accustomed to positively effected student's writing ability. These skills can be used by students throughout the school curriculum to achieve academically.

Historical Description of Intervention--Keyboarding I

The objective of this project was to improve the academic achievement of at-risk students. The implementation of a work-in-process and a finished portfolio, along

with technique-observation checklists, and goal setting strategies were selected to affect the desired changes. These strategies were selected to attempt to create an organized classroom of students working on-task to achieve academic success.

The action plan was implemented in September during the second week of the school year. The plan was followed closely, but the teacher was not able to cover the classroom work as quickly as planned. The action plan covered four weeks and recycled for fourteen additional weeks. This eighteen-week period encompassed the first semester of the school year. The intervention was implemented for the entire school year; data collection terminated at the conclusion of the eighteen-week period.

The teacher/researcher had the students complete a survey on previous knowledge and experience at the keyboard (Appendix M). The survey gave insight into the number of students who had previous usage of the keyboard, formal or informal, at what age the students began using the keyboard, and if the students had been exposed to any previous keyboarding instruction. In addition, the class rules and expectations form (Appendix N) was distributed for the students' and parents' reading and signing. The teacher placed the returned, signed coupon on file.

The teacher had four keyboarding I classes that were being instructed in the same methods. Each class was given

a specific class color for the work-in-process folder and a different color for the finished portfolio. Both of these folders were left in the keyboarding room. Crates were set up for the students to file the folders. Appendix T is a copy of a picture of this arrangement. All classroom work was placed in the work-in-process folder. The teacher had created a finished portfolio from the previous academic year, and this portfolio was shown to the students as a model.

At the end of each week, students would self-assess the week's work. The students were responsible for the completion of the week's work, but the students would choose the two best representations for the week and paper clip those selections on top of the week's packet. After teacher observation of the work, these selections were then transferred to the finished portfolio. This process occurred throughout the intervention period. As the semester progressed, this work was replaced in the finished portfolio with representations of formatting jobs the students had completed: centering (vertical, horizontal block), enumerations, informal notes, letters, envelopes, reports, and table.

As the next step in keyboarding development arrived, a teacher-made timed writing chart was distributed to the students. In order for the students to monitor progress on these specific areas of keyboarding development, the

students were given the charts to record weekly timing rates (Appendix O). The best timed writing score for that week was then charted by the students.

Initially, the teacher intended to utilized the teacher technique-observation checklist at the end of lessons 6, 12, 18, and 24; but, instead, the teacher implemented the checklist four times during the intervention period rather than every six lessons. The teacher made this change so the observations would be recorded for grading at the two midterm reports and end-of-quarter reports. Observing the students every six lessons would have been extremely time consuming and the teacher realized the difficultly in observing the students so often. Therefore, observation was done at approximately the fourth, eighth, twelfth, and sixteenth week of the intervention period. Copies of the checklist (Appendix G) were made by the teacher, and each student's score was recorded by the student on an individual checklist for reference (Appendix P). The students maintained the record in the finished portfolio. At each interval, the student updated the sheet.

The student and teacher then used this observation checklist for conferencing. Rather than individual verbal conferences, a goal sheet (Appendix R) was distributed to each student. The student studied the scoring listed on the technique checklist and wrote an appropriate goal to work on over the next four-week period of time. These goal sheets

were submitted to the teacher and the teacher agreed with the student's goal or added an additional goal that was also seen as needing attention. These sheets were returned to the student the next day to begin the process of meeting this/these goal(s). This procedure deviates from the intended action plan. Because of time involvement in face-to-face conferencing and the monitoring of classroom behavior while conferencing, the change from a verbal conference to a written goal sheet conference was implemented. The students responded to this procedure and insightful information was acquired by the teacher.

At the end of the next four-week period of time, the goal sheets were taken out and the students typed a short statement on the goal(s) set by the student and the teacher. The students were expected to respond to and assess goal achievement. Again, these were submitted to the teacher for a comment and observation notation. A new goal sheet for the next four-week time frame was completed by the students and teacher. These goal sheets accumulated in the finished portfolio for future reflection by the students.

The portfolios were punched and assembled for teacher assessment at the ninth and eighteenth weeks. The keyboarding book is divided into daily lessons which have from one to four keyboarding jobs per lesson. The teacher gave the students a list of jobs and/or lessons to select representation of work for the finished portfolios. This method gave

both the teacher and student input into the portfolio. The teacher's input was felt necessary so the student would have a broad representation of work tasks completed, and the student's selections were vital for ownership to occur. The teacher would direct what lessons to choose from and the student would then make selections from those lessons. After the assembly was complete, the teacher assessed the student's process and recorded these data on the student's goal sheet. The grading of the portfolio was based on a rubric of neatness and completeness of necessary entries.

The implementation of portfolio creation, written conferencing, and new goal setting proceeded for the remainder of the intervention.

Presentation and Analysis of Results--Keyboarding I

In order to assess the intervention strategies used to improve the academic achievement of the targeted at-risk students, teacher records were kept on keyboarding techniques, timed writings, proofreading skills, and portfolio assessment. The baseline assessments presented in chapter 2 included the keyboarding technique checklist and four short tests covering initial material learned in the keyboarding classroom. The material that was covered in these tests is integrated into the keyboarding tasks the students must produce as the year progresses. Therefore, the analysis that follows in this chapter covers the same material but analyzes the students success in using this knowledge in performing keyboarding jobs.

When the students perform timed writings, calculation of words a minute must take place. By the end of the intervention time, 100 percent of the students were able to complete this requirement.

Likewise, when the students are formatting a job, the left and right margins must be calculated. Again, by the end of the intervention all keyboarding students had successfully accomplished this procedure. Spacing correctly for punctuation was observed in scoring the student's work, and the successful application of this knowledge is reflected in the job figures presented later in this chapter.

Table 6 shows the four times the students were observed for keyboarding techniques. The first column shows the pre-intervention score and the next three scores document observations that took place after the intervention strategies had begun.

Of the 22 students observed three times after the introduction of the intervention, 55 percent raised the technique average over the pre-intervention observation, 18 percent stayed the same, and 27 percent decreased in the keyboarding techniques observed.

Of the six students who had lower averages, it is interesting to note that three students dropped three points off the pre-intervention observation, one student dropped one point, another student dropped four points, but the most dramatic drop was 13 points. The student originally had

scored 33 points but dropped to 20 points for an average. This student was advised at the end of this intervention period to withdraw from the class due to poor achievement. The student has continued having difficulties in school; the student has been suspended on three separate occasions.

The teacher/researcher recommended to the student and parents to re-enroll in keyboarding the following academic year. The student's skills were so low that second semester's work load would have been very stressful and difficult to complete at the level of achievement acquired by the student.

The other five students progress has been adequate. Even though the keyboarding techniques skills of these students declined, achievement level has been satisfactory.

Another area of assessment during the intervention period was the students' timed writings. In the following table, a comparison is made from the students' baseline timed writings to the timed writing administered at the end of the intervention.

Table 6

Teacher Observation Keyboarding I Technique Checklist

Pre- and Post-Intervention

Expressed in Percentage of Correct Skills

I.D.	Pre	Post	Post	Post	Post Avg.
A1	58	92	89	100	94
A2	92	100	89	86	92
A3	83	92	81	92	89
A4	75	58	61	81	67
A5	86	81	81	75	78
B2	61	78	86	72	78
B3	75	81	97	86	89
B4	86	86	94	83	89
B5	69	75	69	72	72
C1	92	83	83	86	83
C2	83	100	97	92	97
C3	47	86	86	67	81
C4	83	86	81	78	81
D1	94	100	94	89	94
D3	56	58	69	78	69
D4	100	100	100	100	100
E1	92	83	92	83	86
E2	97	86	97	75	86
E3	75	78	67	83	75
F1	92	67	58	42	56
F2	72	97	100	100	100
F3	61	61	83	64	69
Avg.	81	86	89	86	86
Median	83	89	89	83	86

Table 7 timed-writing data shows clearly that improvement for 77 percent of the students occurred during the intervention. Three students', or 14 percent, timed-writing letter grades did not move from the beginning of the academic year to the end of the intervention, and two students, or 9 percent, had a decrease in the level of timed-writing achievement.

On the timed-writing charts provided the students (Appendix O) are the scales used to access the students' timed writing work. Each quarter of the school year the charts change. In order to maintain the same letter grade each quarter, the student's score must move at least five words a minute. Therefore, using the scoring 5 = A, 4 = B, 3 = C, 2 = D, and 1 = F, not only did the students' speed increase during the intervention, but the scores went from an average of 2.76 (D+) to a 3.64 (B-). This improvement was substantial and must be attributed to improved keyboarding techniques.

Table 8 presents a review of the pre-tests analyzed in chapter 2. This table shows the number of students receiving "A", "B", "C", "D", and "F" grades on the four weekly teacher-made tests. The targeted class began with 23 students. One student moved from the district early into the research project and this student has been removed from this table. Comparing this table with figure 2 shows the number of targeted students that showed improvement in class work over the intervention period.

Table 7

Timed Writings (TW) Growth Records

Expressed in Letter Grades

I.D.	Baseline TW	Ending TW
A1	A	A
A2	B	A
A3	D	D
A4	D	C
A5	D	C
B2	C	D
B3	D	C
B4	F	C
B5	D	B
C1	F	B
C2	D	A
C3	D	C
C4	D	C
D1	D	B
D3	B	C
D4	B	A
E1	C	A
E2	B	A
E3	B	A
F1	F	D
F2	C	B
F3	D	C
Average	D+	B-
Median	D	B

The scores received on end of quarter one jobs are exceptionally higher than the pre-test scores. The scores at the end of quarter two are considerably lower than quarter one, but the students' numbers are still more positive than on the pre-tests conducted. The results were encouraging to the researcher/teacher.

Table 8

Pre-Intervention Weekly Tests

	Number of Students Categorical Scores Pre-Tests and Post-Tests					
Score Categories by Percent	Tst 1	Tst 2	Tst 3	Tst 4	End Qtr 1	End Qtr 2
100 - 94 = A	9	7	6	4	13	2
93 - 87 = B	4	0	4	4	5	7
79 - 86 = C	2	0	3	2	2	8
70 - 78 = D	4	2	3	6	1	2
69 - 0 = F	3	13	6	6	0	3
Mean Score	84%	93%	84%	70%	2.98 = C-	3.12 = C
Median Score	90%	50%	85%	75%	4.89 = A-	3.4 = C

Number of Students = 22
Tst = Test

In figure 2, the data strongly shows a dip in academic performance in the scores on the formatting jobs from quarter one to quarter two of the implementation of the intervention.

On quarter one jobs, 59 percent submitted "A" work versus 9 percent on quarter two jobs. The "B" range of

student performance went from 23 percent quarter one to 32 percent quarter two. In the range of "C," quarter one only had 9 percent receiving a "C," but the quarter two saw a significant increase to 36 percent. On quarter one, only 9 percent fell into the "D-F" category. Unfortunately, at the end of quarter two, the number of "D-F" grades rose to 23 percent.

Figure 2

This dip in performance can be attributed to a number of factors:

1. The level of job difficulty at post-test intervention which was at the end of the second quarter versus pre-test intervention at the end of first quarter is much greater.
2. The amount of work covered in second quarter escalates over first quarter which puts stress on the students' time element. The students must step up the speed of finishing work and therefore, some students do not allow time to perform proper proofreading and correction procedures.
3. In this targeted class of students, the lack of ability to transfer material learned to similar tasks was very evident to the teacher/researcher. Formal instruction would take place as each new formatting procedure occurred. Practice material would then be assigned and teacher assistance would always be available. Later in the grading period, the students would have to revisit these formatting rules by doing additional jobs and, unfortunately, retention of previous knowledge and transfer of previous learning experiences did not come easily to the students. This lack of retention and/or transfer attributed to lower academic success.
4. The students are always permitted access to previous lessons from the classroom textbook and previous work found either in the students' work-in-process folder or finished portfolio. Lack of motivation seemed evident

in the observation of students not willing to reflect back on these materials.

So often, the students want to rely on the teacher parroting each step as the tasks are performed. In the process of doing this research project, the teacher/researcher found this was an area of concern by the faculty. This "spoon feeding" procedure by this teacher/researcher was curtailed; this was displeasing to these targeted students. In order for mastery of skills to occur, revisiting and metacognition must take place. Further encouragement of the students' usage of these skills of reflection and searching out the needed information continued.

In the area of proofreading skill assessment, figure 3 indicates a significant improvement in skill development from pre- to post-intervention. The pre-intervention proofreading assessment is in Appendix K and shows as test 3 on table 8.

As clearly shown in figure 3, the distribution of percentages on the pre-intervention test was fairly consistent among "A", "B", "C", and "D." There were no "F" grades. The "A" and "C" grades registered 27 percent, and the "B" and "D" grades registered 23 percent.

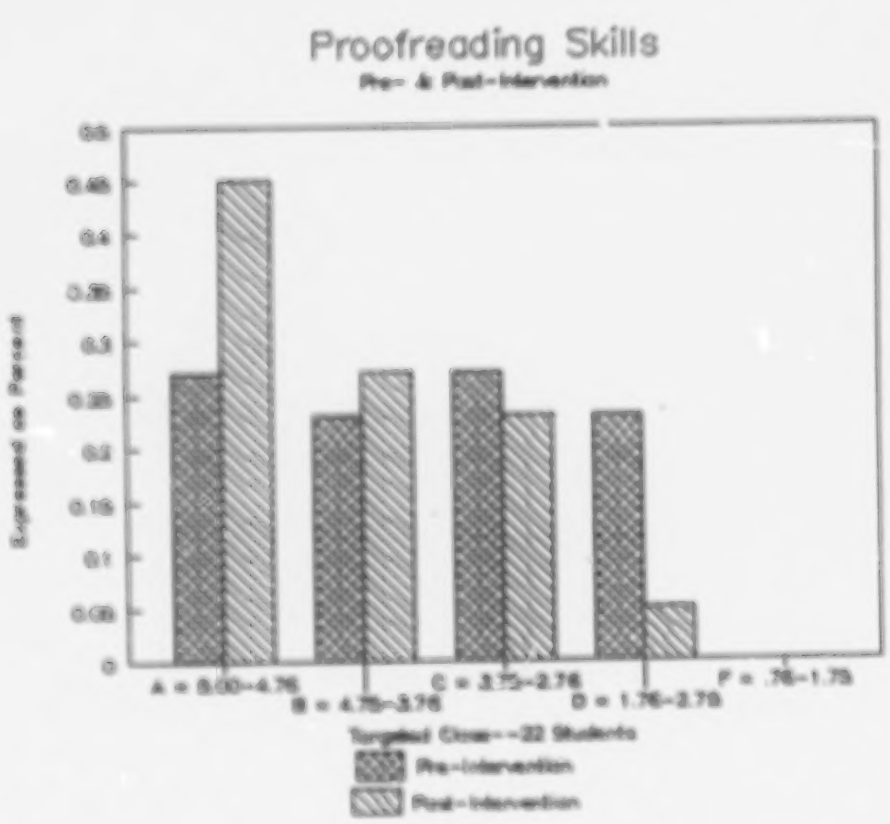

Figure 3

The post-intervention assessment, indicates proofreading skill attainment. The "A" grade jumped to 45 percent, "B" grades rose to 27 percent, "C" dropped three percentage points to 23 percent, and the "D" range dropped dramatically to 5 percent. Again, there were no "F" grades. This was very exciting to the teacher to realize the substantial improvement that was gained by the students' achievement in proofreading skills.

The final assessment for the period of intervention is the finished portfolio. Over the intervention period, the

students performed many tasks at the keyboard. The teacher recorded each lesson, and at midterm, the end of quarter one, second midterm, and the end of quarter two distributed to the students a list of lessons and jobs. For some lessons, the teacher required a specific job be included in the portfolio, but for other lessons, the students had the freedom to self-assess and select jobs to include in the portfolio.

Table 9 shows the numeric score each student earned both first and second quarter on this portfolio. A perfect score was 50 points. The grading of these portfolios was based on completeness of entries and neatness in assembling the portfolio. Both the median score and the average score were higher for quarter one than quarter two. Also, more students scores dropped from quarter one to quarter two. This was disappointing to the teacher/researcher. The teacher had anticipated more pride in the work done on the portfolio but, instead, less interest was expressed in the portfolios as the school year progressed. Seven students' grades remained constant: five earning 50 points both quarters; one earning 40 points both quarters; and one, unfortunately, receiving zero both quarters. The last student dropped the class at the end of the semester due to lack of academic achievement and poor keyboarding skill development.

Table 9

Portfolio Assessment

End of Quarters 1 and 2

I.D.	Quarter 1	Quarter 2	Same	Up	Down
A1	45	50		+5	
A2	50	50	X		
A3	50	45			-5
A4	25	40		+15	
A5	35	40		+5	
B2	35	30			-5
B3	25	50		+25	
B4	45	45	X		
B5	35	40		+5	
C1	50	50	X		
C2	50	50	X		
C3	10	0			-10
C4	45	40			-5
D1	50	45			-5
D3	40	43		+3	
D4	50	50	X		
E1	50	45			-5
E2	50	48			-2
E3	50	40			-10
F1	0	0	X		
F2	50	50	X		
F3	50	38			-12
Average	40.45	40.41			
Median	50	45			
Total Student Changes			7	6	9
Points Portfolios Went Up				58	
Points Portfolios Went Down					59

Based on these data, the finished portfolio did not seem to be an effective intervention to improve the academic achievement of at-risk students.

Conclusions and Recommendations--Keyboarding I

Reviewing the semester grades earned by the targeted students: 9 percent received grades of "A," 55 percent received grades of "B," 27 percent received grades of "C," 4.5 percent student received a grade of "D," and 4.5 percent received a grade of "F". These grades indicate 91 percent of the targeted class were increasing the on-task time to achieve academic success. This is very positive feedback. In looking through the data collected, the strategies implemented met with measurable success. Students' keyboarding techniques, timed writing ability, proofreading skills, and semester grades indicated that most of the students had increased on-task time to improve academic achievement.

The improvement in the students timed writing skills was substantial and must be attributed to improved keyboarding techniques. The teacher's strategy of evaluating the students' keyboarding techniques, communicating these scores to the students, and the students setting achievable goals impacted the success of these students

When all the data is examined, the overall picture is very positive, and, therefore, makes the researcher more optimistic about the outcome of the portfolio grades.

The plan that was put into effect in the targeted class of at-risk students was also implemented in the other three sections of keyboarding I. These classes also benefitted and realized more success in developing keyboarding skills.

Working on a day-to-day basis with these targeted students masked the success the strategies were effecting. Only after reflection of past performance of at-risk students and an analysis of collected data was the success of the strategies made clear.

If a similar strategy were being considered by a classroom teacher, I would recommend drawing up the rules and expectation form as a class rather than by the teacher. When the students create the rules and consequences, ownership takes place and classroom behavior is more positive.

The timed writing charts were an effective way to monitor progress from week to week. This teacher should have spent more time directing the students to chart weekly work rather than expect them to do the charting without teacher supervision. For this strategy to be effective and reflective, the charting needed to be consistent. Often times when a grade is not assigned to a task, the student forgets to get the assignment completed.

The keyboarding classes' student population in the targeted high school are predominantly of freshmen status. Often these young students' organizational skills are weak. The work-in-process folders that were provided by the school district were very helpful in organizing the students who

were weak in this area. These folders remained in the classroom and had a beneficial impact on academic achievement because loss of class work completed but not yet submitted to the teacher was minimal. Note sheets and weekly assignment sheets were also stored in these folders for quick reference by the students also. Paper and a writing instrument could also be stored in the folder eliminating unpreparedness for class activities.

The strategy related to portfolio creation that generated the most success on this targeted class of students was the written goal setting by student and teacher. The students took this responsibility very seriously and worked to meet these goals over the four-week period of time. The teacher eagerly responded to the goals set and also added additional goal(s) if needed. These goal sheets were discussed and referred to often in class with the intention of keeping the students focused on attaining these goals. After the four-week interval, reflection took place on progress toward goal attainment. The students' action plans to accomplish the goal(s) in the next four-week period of time were assessed. Great success was realized by both the students and the teacher with these goal sheets.

The students expressed satisfaction in the grading process of self-assessing and ordering the work for the teacher's assessment. Students recognized that bad days can occur without panic and devastation, lack of understanding

and incorrect formatting of jobs can happen without failure, but finally mastery takes place and the reward of an achieving grade is still obtainable.

The culminating outcome of the project was the finished portfolio. Some students looked at the portfolio initially as just another assignment; but as the year progressed, students developed pride in this collection of work and valued the worth of knowledge and effort that was accumulating in the folder.

In conclusion, the success of the goal setting, self-assessing, and portfolio creation was a valuable experience to the targeted at-risk students and the teacher. This strategy improved the academic achievement of the keyboarding I students at the targeted high school.

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APPENDICES

WRITING SURVEY

Name_____ Date_____

1. Are you a writer?_____
[If your answer is YES, answer question 2a. If your answer is NO, answer 2b.]

2a. How did you learn to write?_____

2b. How do people learn to write?_____

3. Why do people write?_____

4. What do you think a good writer needs to do in order to write well?_____

5. How does your teacher decide which pieces of writing are the good ones?_____

6. In general, how do you feel about what you write?_____

OBSERVATION CHECKLIST

Teacher: _____ Class: _____ Date: _____

Target Skills: _____

Ratings:
- ● = Frequently
- / = Sometimes
- ○ = Not Yet

NAMES OF STUDENTS	Topic Sentence/ Conclusion	Supporting Sentences	Style	Varied Sentence Length	Capitalization/ Punctuation	Spelling	Grammar	COMMENTS
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								

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Appendix C - Woodcock Johnson Revised on Written Language Skills

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Appendix D - Status of the Class Form

STATUS OF THE CLASS

Name _____

Week of _____ to _____

Assignment:

Assignment:

Assignment:

Assignment:

Assignment:

REVISING STRATEGY FORM

Name Date

Why did you choose this place?

Skills I used:

Things to work on:

Appendix F - Writing Rubric

WRITING RUBRIC WRITER_____

1. Topic Sentence

Not Yet Understandable Awesome

2. Complete Sentences

Not Yet Understandable Awesome

3. Wide Vocabulary

Not Yet Understandable Awesome

4. Capitalization/Punctuation

Not Yet Understandable Awesome

5. Spelling

Not Yet Understandable Awesome

6. Grammar

Not Yet Understandable Awesome

What might be improved:

SCORE____

54-60=A 48-53=B 42-47=C 36-41=D 0-40=F

Appendix G - Teacher-Made Keyboarding Technique Checklist

ROW #_____ TYPEWRITING TECHNIQUE EVALUATION

Seat No.	1	2	3	4	5
Students' Names					
Areas of Evaluation Categorized Below					
Uses correct fingering on alphabetic keys					
Uses correct fingering on special keys					
Correctly removes paper					
Proper use of warmup time					
Keeps palms up off machine frame					
Keeps fingers curved while keying					
Keeps finger contact with home row					
Exhibits proper seating posture--feet flat on floor, head erect, back straight, body a handspan from machine, elbows close to body, and arms hanging loosely at sides					
Makes proper use of class time					
Has a good mind set and attitude					
Observes end of period "cleanup routine"					
STUDENTS' TOTALS					

Grading Scale:

3 points - always does
2 points - usually does
1 point - needs improvement
0 point - rarely does

Points	Grade
33 - 36	A
29 - 32	B
21 - 28	C
13 - 20	D
0 - 12	F

ROOM 7--CLEAN UP ROUTINE

- TURN OFF TYPEWRITERS
- PUT PAPER RELEASE AND PAPER BAIL IN BACK POSITION
- CLEAN UP AND THROW AWAY ALL "JUNK"
- PUSH CHAIRS UNDER TYPEWRITERS

THIS IS <u>YOUR</u> RESPONSIBILITY

DO THIS EVERY DAY

CLEAN UP AFTER YOURSELF!!

Keyboarding I-Quiz-Machine Parts

1. The part that moves the carriage or carrier backward one space at a time. _____

2. This part should always line up at zero on the machine. _____

3. The guide to use to set the margins._____

4. Which margin scale are we using for setting our margins? Circle correct answer.

10 scale 12 scale 15 scale

5. This key is used to lift errors off the paper. _____

6. This machine part loosens the paper for straightening or removing it from the typewriter._____

7. This key will temporarily unlock the margin(s). _____

8. This machine part contains all the letters, numbers, and symbols displayed on the keyboard._____

9. The plastic blade against which paper is placed when the paper is being inserted into the machine._____

10. This key controls the space between the lines of typing--single (1), spacing and a half (1 1/2), double (2), and triple (3). _____

11. This part holds the paper against the platen/cylinder. _____

12. The place where the printwheel strikes the paper. _____

13. The part used for returning the carrier/carriage to the left margin and advancing the paper for the start of the next line._____

14. This is the large roller around which the paper is rolled._____

15. This part positions the printwheel so that a capital letter can be typed._____

MACHINE PARTS AND KEYS

Carrier Return Key

Paper guide

Backspace key

Margin scale

Shift key

Paper release

Line space selector

Paper bail

Print wheel

Platen/cylinder

Correction key

Margin release

Printing point

Paper guide

In the space provided below, explain to me the correct posture that should be used when typing.

QUIZ--KEYBOARDING I--FIGURING MARGINS each valued at 10 pts.

1. If you are told to set your margins for a 50 space line, showing your work, tell me what the margins would be set at.

2. If you are told to set your margins for a 70 space line, again showing your work, tell me what the margins would be set at.

Keyboarding I--Calculating WAM/Counting Errors

Use the following paragraph as a guide and scale to proofread and mark errors and calculate words a minute for the timing given below:

THIS PARAGRAPH IS THE GUIDE AND SCALE TO USE TO SCORE THE TIMED WRITING BELOW:

The old man who walks in the park always has a big smile on his face. He talks to each person who comes his way. He gives aid in his quiet way and is excited when he makes a new friend. He is amazed at those who join him there.

1 2 3 4 5 6 7 8

ON THE ONE-MINUTE TIMING BELOW:

1. Circle all the errors.
2. Calculate the words a minute typed.
3. Record the WAM/Errors on line below the timing.

The old man who walks in the park away, has a big smile on his face. He talks to each person who comes his way. He gives aid in his quiet way and is excited when he make a new freind. Her is amazed at those who join him their.

The old man who walks in the the park

_____ WAM

_____ ERRORS

Appendix L - Teacher-Made Test

_____Name

_____Class

Punctuation Quiz--Keyboarding I

Indicate the spacing required after each of the following punctuation marks. Write 0 (for none required), 1, or 2 in the answer blank at the right of each item.

1. After a period that ends a sentence 1._____
2. After a period at the end of an abbreviation 2._____
3. After a period used with an initial 3._____
4. After a semicolon within a sentence 4._____
5. After a comma within a sentence 5._____
6. After a question mark that ends a sentence 6._____
7. After a dash within a sentence 7._____
8. After an exclamation mark at the end of a sentence 8._____
9. After a colon 9._____
10. After a hyphen in a hyphenated word 10._____

STUDENT SURVEY--KEYBOARDING I

PLEASE CIRCLE WHERE APPROPRIATE OR ANSWER TO THE BEST OF YOUR KNOWLEDGE. THANK YOU FOR YOUR COOPERATION.

1. What year in school are you?

FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
20 = 87%	1 = 4%	2 = 9%	0 = 0%

2. Have you previously worked on a computer or typewriter?

YES	NO
15 = 65%	8 = 35%

3. Do you have a computer or typewriter in your home?

YES	NO
18 = 78%	5 = 22%

4. Have you used computers in school without any formal keyboarding instruction?

YES	NO
19 = 83%	4 = 17%

5. Have you previously had any keyboarding instruction in school?

YES	NO
11 = 48%	12 = 52%

6. If you answered yes to #5, what year in school did this instruction take place?

	No Instruction	7th Grade	8th Grade	9th Grade
	12 = 52%	7 = 30%	3 = 13%	1 = 4% (fail

7. How long a period of time was this instruction for?

NINE WEEKS OR SHORTER	ONE SEMESTER	ONE FULL YEAR
10 = 39%	1 = 4%	1 = 4% (failed)

8. If you answered yes to #5, since the instruction you stated in #6 has there been any follow up instruction?

YES	NO
1 = 4%	10 = 43%

9. Do you think that learning keyboarding is the ability to be coordinated?

YES	NO
18 = 78%	5 = 22%

10. Please circle the reason you signed up for keyboard?

1 = 4% COUNSELOR RECOMMENDED IT

5 = 22% PARENTS/GUARDIAN RECOMMENDED IT

8 = 35% FELT IT WAS IMPORTANT BECAUSE OF THE "COMPUTER WORLD" WE LIVE IN

8 = 35% NO REAL REASON/JUST AN ELECTIVE

1 = 4% OTHER (PLEASE STATE BRIEFLY) Deformity to hands-help improve use of hands.

Appendix N - Class Rules and Expectations Form

August 22, 1995

Dear Parent/Guardian:

Your student is enrolled in Keyboarding I for the 1995-96 school year. Keyboarding techniques (eyes focused on book not keyboard, curve of fingers, wrists elevated off keyboard, etc.) are an important part of learning this worthwhile skill. To be the best typist possible, we must establish excellent keyboarding skills. It has been proven through research that carpal tunnel syndrome and other occupational related problems can be caused by lack of proper keyboarding technique.

The biggest drawback of keyboarding students in the past few years has been exposure to the computer without previous keyboarding instruction. Because of this computer usage, they have developed poor keyboarding techniques--especially looking at their keyboard--while inputting information. It is also proven through research that learning the keyboard and being a good typist is accomplished through the use of our mental ability not only our dexterous ability. Students can mentally practice the use of the keyboard without being at a keyboard, therefore, I encourage you to help stimulate them to use this mental exercising to accomplish learning the location of the keys on the keyboard. My goal as your student's keyboarding teacher is to help her/him accomplish the goal of being the BEST KEYBOARDER HE OR SHE CAN BE. In my classroom the students do not compete with each other, but they compete with themselves to constantly strive to do their best.

The assessment process in keyboarding will be based on short quizzes, timed writings, daily keyboarding jobs, a technique observation checklist, and a student-developed portfolio.

Attached you will find the behavioral expectations I have established for the business education classroom. It is proven and documented through research that parent/guardian involvement is vital to the success of students. Please read over these guidelines with your student, both signing the bottom coupon, and your student should return it to me.

Also attached is a computer lab contract to be signed by both the student and the parent/guardian. Class size allowing, I hopefully will be taking the keyboarding students to one of the high school labs. Please return this form with the behavioral expectations form.

If you have any questions, please contact me at the high school. Working together will help all students to succeed.

Sincerely,

Mrs. Barbara Klinger
Business Education Instructor

Attachments

EXPECTATIONS FOR CLASSROOM ENVIRONMENT

Mrs. Barbara Klinger

1. Students must be in the classroom before the bell to avoid a tardy mark on the attendance sheet.

2. At the end of the hour each day, please turn off your typewriter.

3. Chairs should be pushed in under the typewriters. When they are left out in the aisle, it makes it very difficult for other students to leave the room.

4. Correct usage of the machines in the classroom should take place at all times. If a student tampers with the machines, they are subject to disciplinary action. DO NOT WASTE THE FILM RIBBON BY CORRECTING TAPE. THERE ARE A CERTAIN NUMBER FOR THE SCHOOL (TAXPAYER) AND THEY MUST BE CONSERVED.

5. No food or beverages are permitted in the classroom. Gum is permitted as long as the student does not cause a distraction to either the teacher or other students (i.e. cracking the gum or blowing bubbles!). Please always dispose of the gum in the garbage cans so not to have it end up on student's clothing.

6. When you have paper to throw away, please walk to the garbage can. Do not toss it through the air.

7. When we do timed writing tests, NO ONE is allowed to talk or vocally express frustration. This is a distraction to other students and can cause them to make mistakes. One warning is given. Any infraction after that results in a F grade on that timed writing.

8. When timed writings are being administered, students MUST continue to type through the entire timing--stopping results in a zero grade.

9. Please demonstrate RESPECT AND CONCERN for other students and teachers ALWAYS.

10. ABSOLUTELY no lining up at the door before the bell rings.

PLEASE SIGN THE APPROPRIATE SECTION BELOW AND RETURN TO THE CLASSROOM TEACHER. THANK YOU.

I have read the above rules and understand the importance of my student, _____, abiding by these rules.

_____
Parent's/Guardian's Signature

I have read the above rules and understand the importance of abiding by these rules.

_____
Student's Signature

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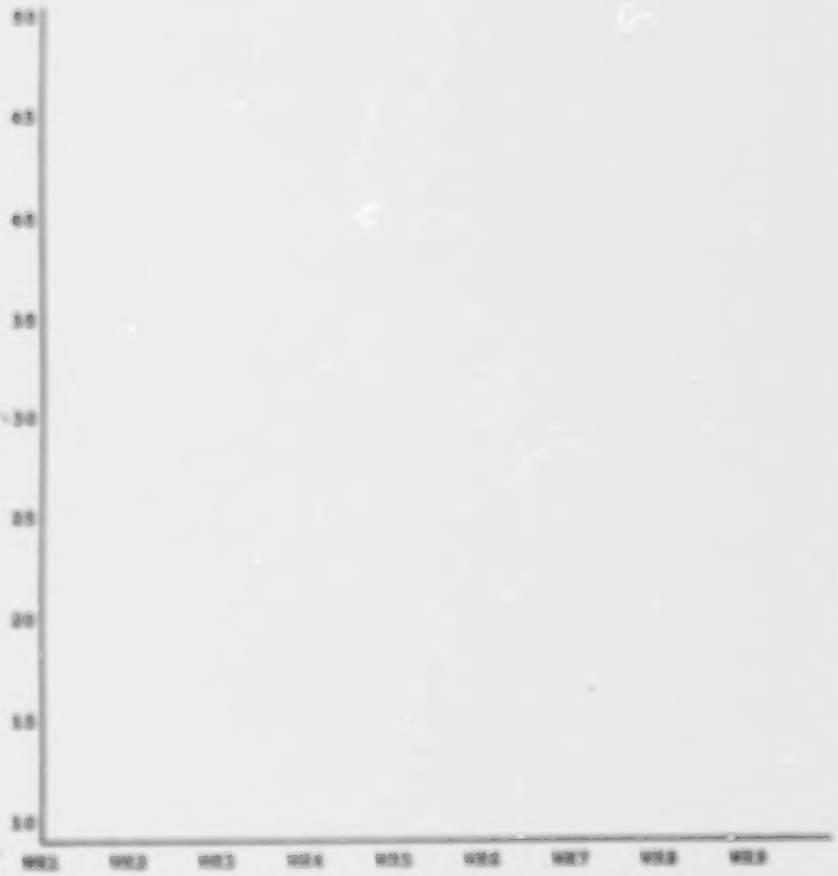
Appendix O - Timed Writing Charts

Student's Name_____

TIMED WRITING CHART



GRADING 1

25+	-	A
22-24	-	B
17-21	-	C
13-16	-	D

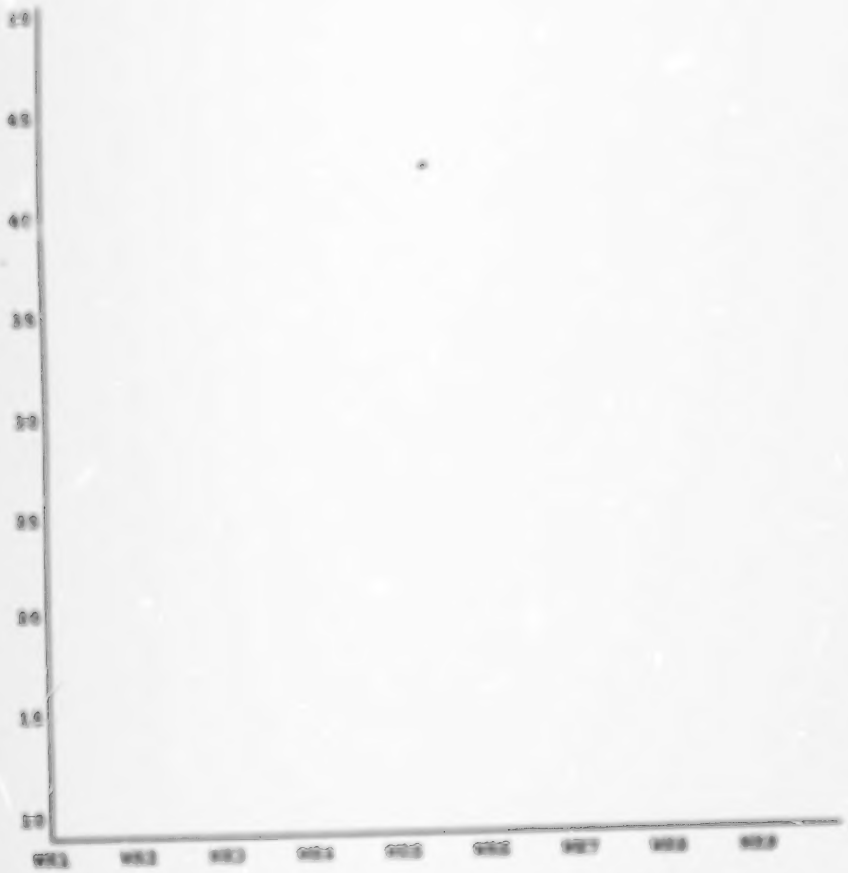
STANDARD FOR ERRORS

1.5 errors per minute

1 errors for 3-minute timing
2 errors for 3-minute timing

Student's Name_____

TIMED WRITING CHART



QUARTER 3

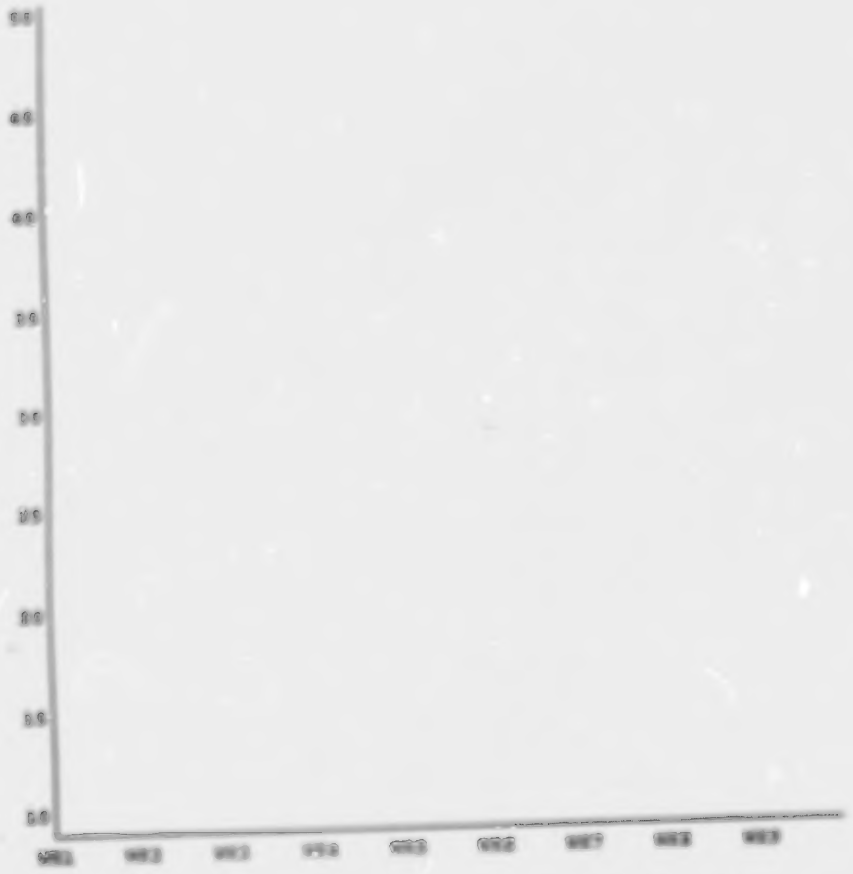
STANDARD FOR GRADES

1.5 errors per minute

30+	:	A
20-29	:	B
15-19	:	C
10-14	:	D

3 errors for 3-minute timing
5 errors for 5-minute timing

Appendix O - Continued



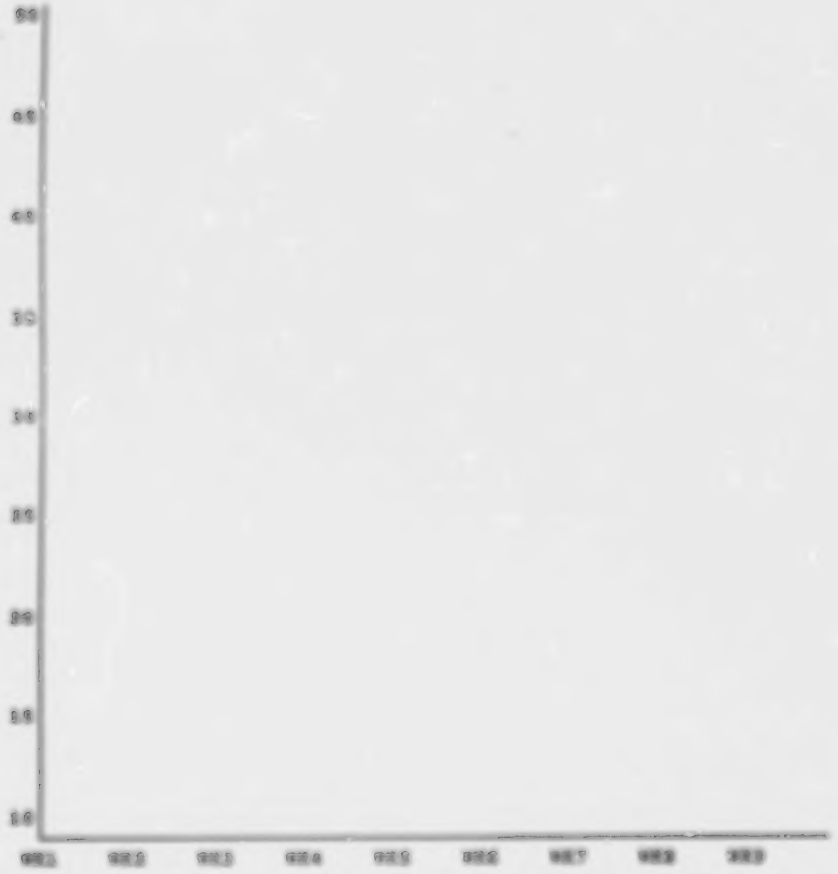
1.0 errors per minute

0 errors for 1-minute timing
7 errors for 5-minute timing

Appendix O - Continued

Student's Name_____

TIMED WRITING CHART



QUARTER 4

STANDARD FOR ERRORS

1.0 errors per minute

40+	-	A
30-39	-	B
25-34	-	C
20-29	-	D

5 errors for 3-minute timing
7 errors for 5-minute timing

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ROW #_____

TYPEWRITING TECHNIQUE EVALUATION

GRADING PERIOD	1	2	3	4	AVG
Student's Name					
Areas of Evaluation Categorized Below					
Uses correct fingering on alphabetic keys					
Uses correct fingering on special keys					
Correctly removes paper					
Proper use of warmup time					
Keeps palms up off machine frame					
Keeps fingers curved while keying					
Keeps finger contact with home row					
Exhibits proper seating posture--feet flat on floor, head erect, back straight, body a handspan from machine, elbows close to body, and arms hanging loosely at sides					
Makes proper use of class time					
Has a good mind set and attitude					
Observes end of period "cleanup routine"					
STUDENT'S TOTALS					

Grading Scale:

3 points - always does
2 points - usually does
1 point - needs improvement
0 point - rarely does

Points	Grade
33 - 36	A
29 - 32	B
21 - 28	C
13 - 20	D
0 - 12	F

TIMED WRITING RUBRIC

FIRST QUARTER

25 - UP = A

21 - 24 = B

17 - 21 = C

13 - 16 = D

BELOW = F

2-Minute Timed Writing

0 - 1 error--up 1 letter grade

2 - 3 errors--stay at speed grade

4 - 5 errors--down 1 grade

3-Minute Timed Writing

0 - 2 errors--up 1 letter grade

3 - 4 - 5 errors--stay at speed grade

6 - 7 errors--down 1 grade

SECOND QUARTER

30 - UP = A

26 - 29 = B

20 - 25 = C

19 - 19 = D

BELOW = F

WE WILL USE THE SAME ERROR PROCEDURE AS WE DID FOR QUARTER 1.

Appendix K - Student/Teacher Goal Sheet

NAME_____ DATE____/____/____

GOAL SETTING--STUDENT

ONE THING IN MY MATHEMATICS CLASS I AM GOING TO WORK AT IMPROVING BY THE NEXT GRADE_____

GOAL SETTING--TEACHER

MY GOAL I WOULD LIKE TO SEE THIS MATHEMATICS STUDENT REACH BY THE NEXT CONFERENCING DATE

GOALSHEET.SUE

RUBRIC FOR KEYBOARDING JOBS

Definitions

Formatting-arranging a document according to a specific set of rules.

Jobs-are tasks that must be arranged by specific formatting rules. The job(s) must be typed on a clean (front and back) sheet of standard (8 1/2 x 11) typing paper or a piece divided into two even parts. This is determined by the directions.

Each page of a job is valued at 5 pts. If a job has three typewritten pages, then its value would be 15 pts.

Grade	Qualifications
A = 5 pts.	All of the page is formatted correctly; all typographical errors have been corrected neatly; and the work must look wonderful enough to mail to the President of the United States.
B = 4 pts.	One minor error per page equals 4 out of 5 points for that page. Example: One typographical error not corrected brings page down to a B grade, or you forget one formatting rule such as you started on the incorrect line.
C = 3 pts.	One major error takes a job page down two grade points--such as incorrect margins or two smaller errors--such as two uncorrected typographical errors.
D = 2 pts.	The student has completed the work and turned it in but, the teacher has found three errors on the page.
F = 1 pt.	The work has been done and turned in but not correctly formatted or many errors in formatting and/or proofreading.
0 pts.	Student has not turned required work in. When students are absent from school, they are still required to make up work as in any class or a zero grade will be placed in the grade book.

PLACE THIS JOB GRADING SCALE IN YOUR WORK-IN-PROCESS FOLDER SO YOU CAN REFER TO IT AS NEEDED.

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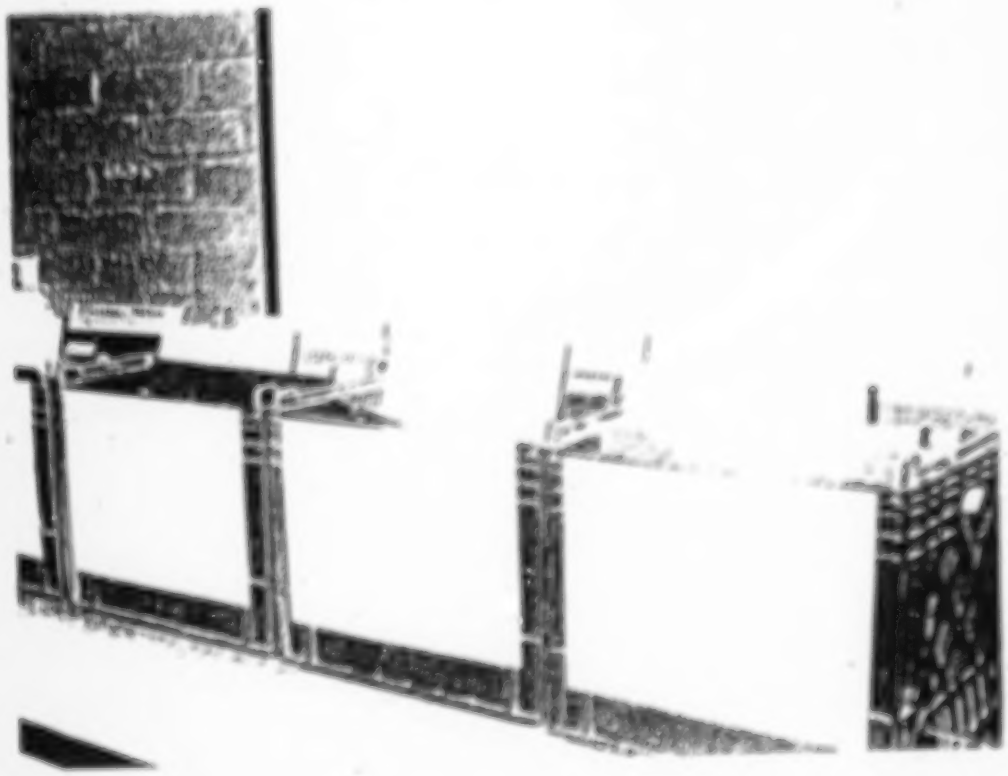
Appendix T - Picture of Crates for Portfolios



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